Coll-HC8123-26-p014 399 26

THE AMERICAN ECONOMIC REVIEW

Vol. XLI May, 1951 Number 2

PAPERS AND PROCEEDINGS

OF THE

Sixty-third Annual Meeting

OF THE

AMERICAN ECONOMIC ASSOCIATION

Chicago, Illinois, December 27-30, 1950

331

Edited by James Washington Bell, Secretary of the Association
and
Gertrude Tait, Executive Assistant

Copyright, 1951, by
American Economic Association

P14399

PRINTED BY GEORGE BANTA PUBLISHING COMPANY

Publication Office: 450 Ahnaip Street, Menasha, Wisconsin

Executive Office: American Economic Association, Northwestern University, Evanston, Illinois

Inquiries and other communications regarding membership, meetings, and the general affai of the Association, as well as orders for publications, should be addressed to Dr. Jam Washington Bell, Secretary of the American Economic Association, Northwestern Unive sity, Evanston, Illinois.

Entered at the post office at Menasha, Wisconsin, as second class matter. Acceptance f mailing at special rate of postage provided for in the Act of February 28, 1925, embodi in paragraph 4, section 412, P. L. and R., authorized September 13, 1928.

The *American Economic Review* is published five times a year, in March, May, Ju September, and December, and is sent to all members of the American Economic Ass ciation as one of the privileges of membership, $5.00 of the annual membership dues $6.00 being in payment of a year's subscription to the publication.

Price, $2.00

TABLE OF CONTENTS

Page

PROGRAM OF THE SIXTY-THIRD ANNUAL MEETING viii

PAPERS

THE ROLE AND INTERESTS OF THE CONSUMER

The Consumer in the History of Economic Doctrine *Mary Jean Bowman* 1

Consumer Sovereignty in Modern Times *George H. Hildebrand* 19

The Distribution of the Product and of Economic Power Under Socialism *David McCord Wright* 34

Discussion

Margaret G. Reid 41

Roland S. Vaile 44

INSTITUTIONAL ECONOMICS

The Co-ordinates of Institutionalism *Clarence E. Ayres* 47

Institutional Economics and Model Analysis *Morris A. Copeland* 56

Veblen and the Social Phenomenon of Capitalism *Abram L. Harris* 66

Discussion

Joseph Dorfman 78

Kenneth H. Parsons 81

EXECUTIVE DECISIONS AT THE TOP LEVEL

Introductory Remarks *Leverett Lyon* 85

Executive Decisions at the Top Level *Forest D. Siefkin* 88

How Are Top Executive Decisions Made? *Ralph E. Flanders* 93

ECONOMIC THEORY, STATISTICS, AND ECONOMIC PRACTICE

Decision Making at the Top Executive Level *Henry S. Dennison* 98

Economic Theory and Quantitative Research: A Broad Interpretation of the Mitchell Position *Rutledge Vining* 106

Straight Thinking Versus Inductive Research in the Solution of Economic Problems *Francis M. Boddy* 119

Discussion

Clifford Hildreth 124

George J. Stigler 126

CAPITAL AND INTEREST

Some Perspectives on Capital Theory *J. Fred Weston* 129

Capital Theory and Progressive Equilibrium *Frank E. Norton, Jr.* 145

The Valuation of Business Capital: An Accounting Analysis *Maurice Moonitz* 157

An Equilibrium Rate of Interest *Arthur H. Leigh* 166

Pa

Discussion
Jacob A. Stockfisch 17
James S. Earley 17

ECONOMIC STABILIZATION

The American Economic Association Committee Report on Economic Instability *Arthur Smithies* 18
Monetary Policy and Stabilization *Lloyd W. Mints* 18
Discussion
Edward C. Simmons 19
Everett E. Hagen 19
Walter A. Morton 19

MODERN INDUSTRIALISM AND HUMAN VALUES

Industrialism and Cultural Values *Harold A. Innis* 20
Defense and Opulence: The Ethics of International Economics *Kenneth E. Boulding* 21
Discussion:
Carl F. Taeusch 22
Walter A. Weisskopf 22
Broadus Mitchell 22

FACTORS IN MODERN INDUSTRIAL DEVELOPMENT

An Assessment of the Role of the Habitat as a Factor in Differential Economic Development *Preston E. James* 22
Invention, Innovation, and Imitation *Yale Brozen* 23
Religion and Economic Backward Areas *S. D. Clark* 25
The Role of the State in Economic Development *Henry G. Aubrey* 26
Discussion
Harold F. Williamson 27
Warren C. Scoville 27

GOVERNMENT ACTION OR PRIVATE ENTERPRISE IN RIVER VALLEY DEVELOPMENT

A Desirable National Water Policy *W. W. Horner* 28
Government Action and Private Enterprise in River Valley Development: A Public Administrator's View *Paul J. Raver* 28
Government Action or Private Enterprise in River Valley Development: An Economist's View *B. U. Ratchford* 29
Discussion:
Joseph S. Ransmeier 30
Dean Russell 31

ECONOMIC PROGRESS: GENERAL CONSIDERATIONS

Selective Culture Change *Sol Tax* 31
Social Structure and Economic Progress: General Propositions and Some French Examples *John E. Sawyer* 32

Page
Experience of United States Private Business in Latin America *Henry W. Balgooyen* 330
The Population Obstacle to Economic Betterment *Joseph J. Spengler* 343
Discussion:
Paul A. Baran 355

DIFFERENTIAL ECONOMIC PROGRESS: SOME CASES, COMPARISONS, AND CONTRASTS

Japan Versus "Asia" *Daniel H. Buchanan* 359
Latin America Versus the United States *Sanford A. Mosk* 367
The Southeast: A Case Study in Delayed Industrialization *John V. Van Sickle* 384
Discussion:
Martin Bronfenbrenner 394
Joseph L. Fisher 395

POINT FOUR: DEVELOPMENT OF BACKWARD AREAS

A Second Look at Point Four *James Baster* 399
Some Basic Policy Issues in Economic Development *Willard L. Thorp* 407

CURRENT PROBLEMS IN INTERNATIONAL TRADE

International Trade Theory and Policy—Some Current Issues *John H. Williams* 418
Welfare-State Measures and the Free Market in International Trade *Klaus E. Knorr* 431
Problems of Trade Between Planned Economies *Michael L. Hoffman* 445
Discussion:
James W. Angell 456
Theo Surányi-Unger 459
Frank Whitson Fetter 462

THE ECONOMY OF THE SOVIET UNION

Soviet Agricultural Collectivism in Peace and War *Lazar Volin* 465
The Economic War Potential of the U.S.S.R. *Joseph A. Kershaw* ... 475
Discussion:
Evsey D. Domar 483
Naum Jasny 484
Edward Ames 489
Harry Schwartz 493

CHANGES IN NATIONAL TRANSPORTATION POLICY

Highway Development, the Railroads, and National Transport Policy *James C. Nelson* 495
An Evaluation of Public Policy Toward the Railway Industry *Ernest W. Williams, Jr.* 506
Subsidies and Competition as Factors in Air Transport Policy *Stanley Berge* 519

Page

Discussion:

William H. Thompson 5
Paul M. Zeis 5
John P. Carter 53

PUBLIC UTILITIES AND NATIONAL POLICY

The Integration of the Electric Power Industry *Horace M. Gray* 5
How Effective Is State Commission Regulation? *C. Woody Thompson* 53

Discussion:

David G. Tyndall 550
Erwin E. Nemmers 552

THE HOUSING PROBLEM: I. THE CURRENT SITUATION

The Housing Inventory: Analytic Concept and Quantitative Change *Leo Grebler* 555
Rent Control and the Distribution of Income *D. Gale Johnson* 569

Discussion:

William D. Grampp 583

THE HOUSING PROBLEM: II. LONG-RUN EFFECTS OF GOVERNMENT HOUSING PROGRAMS

The Role of the Federal Government in Urban Housing *Lawrence N. Bloomberg* 586
Policy Problems in Expanding the Private Housing Market *Sherman J. Maisel* 599

Discussion:

Arthur R. Upgren 612
Edward E. Edwards 613
Raymond J. Saulnier 614

ECONOMICS OF MEDICAL CARE: I. THE PROBLEM

Perspective on the Economics of Medical Care *Eli Ginzberg* 61
Major Areas of Achievement and Deficiency *Franz Goldmann* 62
Requirements for Physicians *Herbert E. Klarman* 633

Discussion:

Louis S. Reed 646
Calvin W. Stillman 648

ECONOMICS OF MEDICAL CARE: II. ALTERNATIVE

The British Health Experiment: The First Two Years of the National Health Service *Seymour E. Harris* 652
Voluntary and Compulsory Medical Care Insurance *Clarence A. Kulp* 66
Welfare Implications of Alternative Methods of Financing Medical Care *Jerome Rothenberg* 67

Discussion:

Frank G. Dickinson 6

Page
Ralph H. Blodgett 692
Carl T. Arlt 694

ECONOMICS IN GENERAL EDUCATION: ROUND TABLE ON REPORT OF COMMITTEE ON THE TEACHING OF ELEMENTARY ECONOMICS
Difficulties in Teaching Economics—What They Are *Laurence E. Leamer* 697
Difficulties in Teaching Economics—Possible Solutions *Albert Lauterbach* 703
This Is What I Should Do Now, If— *Horace Taylor* 710
Comments on the Teaching of Economics *Ben W. Lewis* 714

FARM PROBLEMS: II. AGRICULTURAL PRICE SUPPORT
Comparative Costs of Agricultural Price Support Plans and Certain Policy Implications *George Mehren* 717
Discussion:
John D. Black 747
W. W. Cochrane 754

PROCEEDINGS

MINUTES OF THE BUSINESS MEETING 761
REPORTS:
Secretary *James Washington Bell* 763
Treasurer *James Washington Bell* 777
Finance Committee *Roy C. Osgood,* Chairman 781
Auditor *David Himmelblau and Company* 783
Managing Editor *Paul T. Homan* 788
Committee on Publications *Friedrich A. Lutz,* Chairman 791
Committee on Graduate Training in Economics *Howard R. Bowen,* Chairman 792
Committee on International Co-operation: The I.E.A. *Gottfried Haberler,* Chairman 796
Representative on the Social Science Research Council *Joseph J. Spengler* 798
Representative on the Board of the National Bureau of Economic Research *Donald H. Wallace* 800
PUBLICATIONS OF THE AMERICAN ECONOMIC ASSOCIATION 803

PROGRAM OF THE SIXTY-THIRD ANNUAL MEETING OF THE AMERICAN ECONOMIC ASSOCIATION

Chicago, Illinois, December 27-30, 1950

In accord with the plan of rotation agreed upon by the Allied Social Science Associations for an "all-out" joint meeting every three years, we met this intermediate year as independent groups, co-operating in the program by express arrangement. The program sessions of the American Economic Association took place at the Palmer House, from Wednesday morning to Saturday noon, December 27 to 30. Joint or cosponsored sessions had been arranged with the following eight organizations: American Statistical Association, Econometric Society, American Finance Association, American Farm Economic Association, American Marketing Association, Economic History Association, Industrial Relations Research Association, and Association of University Teachers of Insurance. Each association distributed its own preliminary announcement, but the programs of all those named were included in the joint program available at the meetings. Several sessions which the American Economic Association is merely cosponsoring are not listed in this announcement; the greater number are offerings of the Econometric Society. The American Historical Society and the Association of American Law Schools also met in Chicago at approximately the same time.

Our program was not, this year, organized around any one central theme or small number of themes. A somewhat more than average number of sessions were devoted to economic theory, broadly construed. The majority of the sessions dealt with various currently vital problems. In these, an effort was made to have papers bear upon the general issue of private choice, with the market system as co-ordinating agency, versus governmental control. However, in the process of program building and securing papers on particular topics, this relationship tended to become obscured. The major concentration of the program was in the field of foreign relations, and this was carried somewhat farther than originally planned after the crisis in connection with the Korean war developed in midsummer. Partly because economic history has seemed to be somewhat neglected in recent years and because an opportunity was afforded for co-operation between economics and still other disciplines, particular emphasis was laid on the broad phenomenon of "underdeveloped areas"—the facts of differential economic progress, their causation and import, and the resulting problems for the United States. Five sessions dealing with different topics under this head pivoted around the conception and issues of Point Four.

Tuesday, December 26, 1950

12:00 M. *Luncheon Meeting of the Executive Committee*

Wednesday, December 27, 1950

9:30 A.M. 1. *The Role and Interests of the Consumer*
Chairman: Hazel Kyrk, University of Chicago
Papers: Mary Jean Bowman, Lexington, Kentucky; George H. Hildebrand, University of California at Los Angeles; David McCord Wright, University of Virginia
Discussion: Margaret G. Reid, University of Illinois; Roland S. Vaile, University of Minnesota

2. *Institutional Economics*
Chairman: Allan G. Gruchy, University of Maryland
Papers: Clarence E. Ayres, University of Texas; Morris A. Copeland, Cornell University; Abram L. Harris, University of Chicago
Discussion: Joseph Dorfman, Columbia University; Kenneth H. Parsons, University of Wisconsin

3. *Changes in National Transportation Policy*
Chairman: D. Philip Locklin, University of Illinois
Papers: James C. Nelson, State College of Washington; Ernest W. Williams, Jr., Columbia University; Stanley Berge, Northwestern University
Discussion: William H. Thompson, Iowa State College; Paul M. Zeis, U. S. Department of Commerce; John P. Carter, University of California

12:15 P.M. *Luncheon Meeting: Executive Decisions at the Top Level* (Joint session with the Chicago Association of Commerce and Industry)

To be sure they equate algebraic symbols with quantitative economic terms, but only with loose terms that different economists can construe quite differently. Let me cite just one of several possible examples. There is a fair consensus on the proposition that marginal revenue tends to equal marginal cost. There are sharp differences on the meaning of cost and the way to measure it. It is the formula, not its empirical meaning, that has gained currency.

If during the past decade or so institutionalist answers to economic questions have lost ground in competition with model analysis answers, I suggest that it is partly because they have not been put up in the same kind of package. Clearly this is only a partial explanation, for institutionalists presumably lacked neat and impressive packages for their theories twenty or more years ago. Still the lack is a significant factor in the history of economic thought during the past two decades. And it seems a fair question whether economists are well advised to buy a theory so largely on the basis of the neatness and impressiveness of the package in which it comes.

The major factor to which I attribute the silencing effect on institutionalism is the change in models. During the "teens" and twenties the models in vogue were highly unrealistic. Further, they had never succeeded in purging themselves of certain ethical implications. On the whole they were in the laissez faire tradition. Veblen characterized this type of implicit model analysis as bourgeois homiletics. Institutionalism objected to it both because it was unrealistic and because it tended to support a hands-off public policy. Implicit model analysis was rightist in political orientation; institutionalism challenged it from the left.

Just twenty years ago before a round table of this Association I attempted a summary statement of the here-and-now phase of the institutionalist position. Let me quote some propositions from that summary:

> 1. A scientific hypothesis should be so formulated as to fit existing data.
> 2. The theory that real supply is real demand . . . is a reaction to mercantilism that goes too far . . . a favorable change in the balance of trade may favor business recovery or promote business expansion.
> 3. The consumer, the worker, and the saver are no more ultimate in the nexus of prices than the business enterprise.
> 4. Mitchell in his *Business Cycles* traces the cumulative expansion of incomes and expenditures of businesses, families, and governments during recovery and prosperity and the cumulative contraction . . . during recession . . . we may fairly call Mitchell's theory . . . the first triumph of the empirical natural science method in the study of the behavior of prices and production.
> 5. We should define the price level . . . as . . . a mere average of prices. There may at times be a pervasive common influence on prices such as a credit stringency, or a cumulative movement of prices.
> 6. The behavior of the level of commodity prices from late 1925 to 1929 is difficult to account for on the basis of monetary and credit conditions. Specific factors affecting specific commodity prices appear to account for this period satisfactorily.

models—or some of them—have become more realistic. I want to consider this development in a moment. It is more complicated than it sounds. No doubt revising models in a realistic direction did something to decrease the theoretical differences between model analysts and institutionalists. However, it was not because these theoretical differences became small that little institutionalist criticism of model analysis was heard during the forties.

Before taking up the quieting effects of the revised and more realistic models let me note a second factor that has helped to reinforce these quieting effects. This reinforcing factor may be called the propensity of economists to buy their theory by the package.

Model analysis has thus far been confined to quantitative relationships and it has invariably involved a great oversimplification of the real world. Institutionalism has been concerned to emphasize the complexity of reality and the importance of qualitative as well as quantitative facts.

A simple, neat, schematic answer to a question has always had a survival value quite out of proportion to its real merit. It is easier to remember than a more complicated one and easier to communicate to others.

The answers that model analysis provides to theoretical economic questions are often somewhat intricate. But they are usually neat and schematic. Also, however intricate they may be, they necessarily oversimplify reality by largely excluding qualitative facts; and they commonly oversimplify it by dealing with a very restricted number of variables. Model analysis answers are enough like simple answers to enjoy the same advantages: they are easy to remember and easy to communicate. Moreover, they have an advantage that a simpler answer does not: a prestige value. Mathematics has come to be regarded as part of the ritual of science. Economic model analysts have been able, by practicing this ritual, to command an economic rent through the principle of merit by association.

Because they are easy to remember and communicate and because they sound scientific, the answers model analysis offers to theoretical economic questions have a survival value greater than they deserve. Let me push this point a step further. Certainly the merit of an answer depends upon its meaning. But a model analysis answer in the field of economics can have—or at any rate so far has had—survival value, even when economists have not agreed on its meaning. Various forms of words have gained wide currency among economists, forms that can be translated into algebra, particularly forms that can be visualized in geometric diagrams. I say "forms of words" because it appears to be the form, not the content, that has acquired currency.

INSTITUTIONAL ECONOMICS AND MODEL ANALYSIS

By Morris A. Copeland
Cornell University

Institutionalism has two main phases: one concerned with the process of cultural evolution; the other with the here and now. The line between these two phases is, in one sense, a line between the long run and the short run, but not in the sense familiar in model analysis. The institutionalist thinks even the long-run considerations of the model analyst ought to be fitted into his here-and-now category. By and large the longer-term cultural evolutionary phase of institutionalism and model analysis belong to separate universes of discourse. There can be no real clash between them.

But the subject matter of the here-and-now phase of institutionalism and that of model analysis somewhat overlap. There has been and still is a sharp clash between these two approaches to the study of economics.

The "has been" part of this statement needs a slight qualification; the "still is" part clearly calls for elaboration.

When I say there has been a sharp clash, I refer to the debate that reached its peak during the twenties. It is true we did not talk much of model analysis in those days. At the time, the proponents of this rather mathematical mode of thought called it simply "economic theory" or "economic analysis," as if this approach to the study of economics were the only logical one. The institutionalists, to distinguish it from their own mode of theorizing, called it "system theory." But it will probably be conceded that what they meant by system theory was essentially an implicit form of model analysis. Let me say then that there was a sharp clash between the implicit model analysis of twenty or more years ago and institutional economics, and that during the past fifteen years model analysis has become explicit and much less has been heard of the clash.

Why has less been heard of the clash? Have the differences between model analysts and institutionalists really been ironed out? Prior to the mid-thirties economists in the English-speaking world used mathematical symbols somewhat sparingly. The change-over from system theory to model analysis marks a much more liberal use of algebraic and calculus notation. Certainly this change-over did not placate the institutionalists. But it was accompanied by model changes.

I think the main reason why relatively little has been heard from institutionalists of late stems ultimately from these changes. The in the economy unnecessary. Since, in the absence of unnatural restraints, the economy will take care of itself, no one need bother about details. The very great number of students who have nevertheless done so, especially during the past half-century, seems to indicate that we do not trust the invisible hand quite as unreservedly as strict orthodoxy stipulates. Conversely, the more we know of what is actually going on, the better prepared we are to deal with our problems realistically and the more likely we are to try to do so.

Simply to identify institutionalism with empiricism is a mistake. Descriptive studies are the spadework of institutionalist thinking; but they do not produce a body of theory by spontaneous generation. Nevertheless, they do quite visibly give evidence of "the cultural incidence of the machine process." One of my most empirical colleagues remarked one day after perusing one of my effusions, "Why do you go to so much trouble to establish 'keeping the machines running' as a principle of social action? I would accept it without argument!" Now the shift of focus from keeping prices in equilibrium to keeping machines running seems to me to have a vast significance of which—at that moment, at least—my colleague was unaware; and precisely on that account his unconsidered willingness to adopt a technological criterion of welfare struck me as highly suggestive.

Without being fully aware of its implications (since, after all, most people are not social philosophers), the whole world has come to accept physical production as the criterion of a sound economy. Institutionalism is nothing more, and nothing less, than the intellectual implications of that axiom.

scientific process does contain a valid criterion of value, and therefore of human welfare, then society is not utterly dependent upon the assessments of the market as the sole alternative to the (no more arbitrary but far less palatable) pronouncements of a dictator. In its philosophy of workmanship, institutionalism provides a theoretical foundation for general social and economic planning, one which completely nullifies the a priori supposition of its critics that planning can never be anything but arbitrary.[9] One may doubt the validity of such a theory. But are those who wish to avoid the asperities of dictatorship then well advised to ignore such an alternative to the arbitrary dictates both of tyrants and of markets?

V

At the conclusion of discussions such as this, I have sometimes been asked, "Who, besides yourself, holds these views?" One obvious answer is, "Nobody; and even I have never made this particular statement before, and never will again!" But neither the question nor its answer is very significant. No two of us think exactly alike over the whole of any area as large as the one we have been traversing. The important thing is not agreement or disagreement among persons, but rather logical relationships among ideas. What I have tried to do is to point to a series of relationships by virtue of which a certain set of ideas seem to form a pattern. Granted the possibility of error and the certainty of incompleteness, still any such set of logical affinities, if it exists at all, must touch the work of a very considerable number of people—some closely and many more at least to some degree. I believe that it could be shown quite easily that the work of all those who have been widely recognized as institutionalists bears a close and significant relationship to some such pattern as the one I have tried to draw; and I believe further that a very great deal of work which is not explicitly identified as institutionalist in character is nevertheless complementary to institutionalist theory and itself derives added significance from that fact.

This is true most particularly of empirical studies, or descriptive economics. As I have tried to indicate elsewhere,[10] the very substantial increase of interest in what is actually going on at various points and in various regions of the economy, though it contributes little or nothing to institutionalist theory, is institutionalist in motive and institutionalist in result. One of the most important consequences of classical price theory is that it makes detailed knowledge of what is going on hended the subtleties of money and credit, as some writers have supposed. Veblen saw that tool-using (or instrument-using, as Dewey has preferred to say) is physically productive, a creative process that underlies all the achievements of mankind; and that the exploits by which some men are always seeking to get the better of others are an impediment to workmanship and creative achievement. This basic ethical principle—the instrumental theory of value, as it is now generally known—runs through all of Veblen's work, and is one of the foundation principles of institutionalism.

---

[9] This point is discussed in my article cited above, pp. 227 ff.

[10] "Piecemeal Revolution," *Southwestern Social Science Quarterly,* June, 1949, pp. 12 ff.

Critics often say that whatever institutionalism may be, one thing is certain: it is not a theory of value. Such a statement could mean various things. It could mean that it is not a theory of price; and that is, of course, true. To anyone who is so completely obsessed with the notion that price is the sole valid and objective measure of value that he has come to use the terms "value" and "price" interchangeably, any proposal to seek an objective criterion of value in some other aspect of human endeavor than buying and selling will no doubt seem to be an abandonment of value theory. The issue of ultimate ends is perhaps more serious. To anyone who thinks of value as necessarily derivative from goals which an Almighty Creator (or His modern successor, the Almighty Community) has arbitrarily imposed upon mankind, the proposal to find the criterion of value in the instrumental (tool-using) process, and disvalue in its retardation or arrest, will appear to be a confusion of "ends" with "mere means."

But why "must" values derive from a priori "ends"? Why "must" we attach greater significance to the irrational beliefs and sentiments of the community than we do to the actual, objective, and unquestionably cumulative achievements of hand and brain? After all, scientific know-how and industrial technology are social creations, no less, certainly, than tribal beliefs and community sentiments. Whatever direction science and technology have given and may continue to give to social development is no less the dictate of the community than any other part of our social heritage. One may fail to find "normative" significance in what Edwin Cannan once called "the heritage of improvement." But to assume that none is to be found is to ignore not only Veblen and Cannan and institutionalism generally, and not only the very extensive and formidable work of John Dewey and the instrumentalists, but also the work of many other reputable and accomplished scholars who do not bear these tags—such, for example, as Professor C. I. Lewis.[8]

It is of course apparent that if the technological or instrumental or

---

[8] See C. I. Lewis, *An Analysis of Knowledge and Valuation* (Chicago: Open Court, 1946).

In these circumstances I find the common judgment of institutionalism—that it is all very interesting, but that it has no theory and no principles—somewhat embarrassing. That is, I feel embarrassed for people who entertain such thoughts. Institutionalism is an attempt to find an answer to the sixty-four dollar question that confronts all economics: what does the economy mean? Institutionalism proposes to find that meaning in the interplay of institutions and technology, which in turn are its basic analytical principles, just as classical theory has sought the meaning of the economy in the interplay of wants and scarcity, which (transliterated into demand and supply) constitute its basic principles. To insist, as some economists now seem to do, that only curve-plotting is economic theory is to forget the theoretical presumptions from which alone the significance of curve-plotting derives.

IV

Economic theory is rightly identified as value theory. From the beginning, one of its central problems has been the relation of value-in-exchange to value-in-use. It was at this point that pecuniary analysis seemed to penetrate most deeply into the meaning of the economy; for it seemed to discover in the operation of the market the closest possible approximation to the value judgments of the community. It is likewise at this point that institutionalism has seemed to display its most strategic weakness.

I am afraid that institutionalist writers must bear a large measure of responsibility for this misunderstanding. Their zeal for objectivity has led many institutionalists to devote themselves almost exclusively to empirical studies to the neglect of the interpretation of the facts their studies have disclosed. Veblen went even farther afield. By his ironical disclaimer of any moral judgment he misled a whole generation of students into supposing that he really did regard waste and usefulness as morally neutral categories, and that his whole analysis was therefore rudderless. In doing so I am afraid that he contributed substantially to the cultural relativism that was just coming into vogue during his most active years.

But it is our responsibility not to be misled. Irony notwithstanding, a theory of value is implicit in all of Veblen's work. Surely no one could read *The Theory of the Leisure Class* and still declare that Veblen really thought just as well of waste as he did of workmanship! Surely there can be no doubt about his evaluation of pecuniary employments and industrial employments! Further, such judgments were by n means the naïve expression of the prejudices of a simple country bo who understood about hoes and combines but never quite comp over half a century.[7] Briefly, the theory is that technology (including science) is the dynamic force by which modern civilization (and even, perhaps, all civilization) has been shaped. This is not to say that technology is an external force, external either to human behavior or to social structure. Most emphatically it is not, though much of the misunderstanding of institutionalism derives from the supposition that it is. Indeed, critics seem to feel no embarrassment over denying that civilization is shaped by technology, which for this purpose they themselves regard as an external force, and then turning about and reproaching institutionalists for talking as though machines invent themselves. Actually, institutionalism does neither. It does not postulate that machines invent themselves nor does it treat "the state of the industrial arts" as something external either to human behavior or to social structure.

In recognizing the dynamic character of technology, institutionalism of course does not minimize the importance of the institutional patterns of our own, or any other, society. How could it? The very tag, "institutionalism," signalizes the insistence of Veblen and the institutionalists generally upon the importance of prevailing institutions in the determination of the wants and scarcities that prevail in any community or in any given part of it. Those institutions of course derive from pre-existing institutions and the immemorial past, of which they retain as much as circumstances permit and from which they derive their sanction. But the circumstances which shape and modify and attenuate the institutional heritage are those of technology.

In all this, institutionalism seems to be in line with modern thinking generally. Who would now deny that modern Western civilization has been largely shaped, and is still being shaped, by science and the machine process? Who would now deny that present-day institutions are the "residues" of ancient institutions? To recognize that present-day society is divided into upper, middle, and lower strata is of course to recognize that feudalism is still with us. And to recognize the significance of "mobility" in modern society and of the "fluidity" of modern institutions—to recognize that feudalism persists only as a "residue"—is to recognize what Veblen ironically called the "contamination" of ancient beliefs, sentiments, and habits by the discipline of science and the machine.

---

[7] A brief but explicit statement to this effect by Mr. Dewey himself appears in Joseph Dorfman, *Thorstein Veblen and His America* (New York: Viking, 1934), p. 450. Anyone o whom this suggestion comes as a surprise should reread the opening pages of John ewey, *The Quest for Certainty* (New York: Minton, Balch, 1929). See also Idus L. urphree, *Technology and Institutions* (Library of the University of Texas, 1946: un- blished thesis). The writer states in his preface: "This thesis will point out, by con- t reference to Dewey's writing, what a large part that distinction plays in his thinking, which is generally ignored."

abjuring the use of price data, any more than it means abjuring the use of census data. But it does mean abandoning price theory; that is, the attempt to read the character of the economy in the horoscope of price. We do not consider census data useless because nobody thinks of it as containing a theory of the economy; and there is nothing in the social conception of human nature that would invalidate the statistical treatment of price data. It does invalidate price theory; and on this account alone the so-called "behavioristic" assumptions of institutionalism are indeed highly significant.

III

The consequences of those assumptions are by no means altogether negative. Another linkage by which institutionalism has always been identified has been with anthropology, and this also has been a perennial source of confusion and misunderstanding. Does it mean only that economists must accept human evolution as a fact? But no economist denies that fact. Or does it mean only that economics must take account of the process of social change? But economics has always done so. Economics does not assume the economy to be static, and never has. Economic theory has always been—since long before the time of Adam Smith—a theory of economic development.

The truth is that the significance of the anthropological aspect of institutionalism can be grasped only in conjunction with its behavioristic aspect. What is at issue is not the fact of change, but rather how it comes about. If human nature is not antecedent to social structure, then it is quite useless to try to find an explanation of the development of that structure by procedures which begin with a contrary assumption, and an alternative explanation must be sought. Moreover, if human nature itself is a social phenomenon, that alternative explanation must necessarily be couched in terms of social forces.

This is the reason for the insistent concern of institutionalists with social institutions and with "workmanship," or technology. That concern has its origin not in a sort of literary interest in describing the social scenery in which economic activity occurs but rather in the conviction that social change (including economic development) can be explained only in terms of social forces and not in terms of "human" wants or "natural" scarcity—both of which are of course defined by prevailing institutions and the state of the industrial arts.

Thus the substance of institutionalism is its attempted identification and differentiation of what Veblen called "the larger forces moving obscurely in the background" of the surface phenomena of the market place. That effort was Veblen's lifelong preoccupation. It has also been the constant underlying concern of John Dewey for well things have turned out, that word has come to be applied to the particular crotchets of John Broadus Watson and his closest associates rather than to the trend of the whole science of psychology away from psycho-physical parallelism and the stuff of which the "mind" is made and toward a functional conception of human behavior. Needless to say, institutionalism is properly identified with behaviorism in the latter sense. Moreover, what is significant is not so much the rejection of mind-stuff as the cultural corollary of the functional conception of behavior.

The greater is the significance of learning in human behavior, the greater is the significance of what is learned; that is to say, culture. What is wrong with classical price theory is its mental atomism. Economics is the study of the economy; and classical economics (in its entirety) is an attempt to explain economic patterns as the consequence of the concatenation of the individual acts of a vast concourse of individual human beings who are what they are "by nature." But human beings are not what they are in any intelligible sense of the phrase "by nature." Human beings are social phenomena. Social patterns are not the logical consequents of individual acts; individuals, and all their actions, are the logical consequents of social patterns.

All that institutionalism proposes to do is to accept the full significance of the conception of human nature which is now axiomatic, not only to all present-day psychologists but to all social scientists. Strangely enough, economists themselves do not commonly deny that human nature (or individuality, or selfhood) is a social phenomenon. Except for very occasional reversions to neo-Cartesianism,[6] even the most orthodox economists do not explicitly reject the premises of twentieth century psychology and the other social sciences, notwithstanding the fact that contrary assumptions are implicit in their own work. The explanation of this anomaly is to be found, I believe, in what might be called professional inertia. The business of devising graphs to represent various price patterns has become an enterprise of such magnitude that one can easily devote his life to it without ever pausing to reflect that the whole significance of the enterprise derives from assumptions which all other scholars now judge to be highly questionable.

For price patterns can be conceived to reveal the character of the economy only if some of those patterns be regarded as the consequence of a human nature that is antecedent to all social patterns while others are regarded as evidence of "unnatural interference." Recognizing that human nature is itself a social phenomenon obviously does not mean tionalism as a basic social philosophy. I refer to such things as the economic-planning movement and the underconsumptionist movement of which Keynesian economics is the most formidable expression. There is a natural affinity, so to speak, between institutionalism and all such developments which seems to me highly significant.[5]

---

[6] See, for example, F. A. Hayek, "The Facts of the Social Sciences," *Ethics*, October, 1943, pp. 1 ff.

In the present paper I shall have time to note only the principal features of the institutionalist landscape. Indeed, I shall limit myself to three. All three are well known; but they are known somewhat as distant mountains are recognized by travelers. Are they isolated peaks, dating perhaps from different geologic epochs? Or are they related features of a single massif? To many commentators they have seemed to be quite distinct, and they have therefore, naturally, failed to make a pattern; and even those who have postulated a relationship by which the institutionalist position is somehow oriented have nevertheless found it difficult to figure out just what that relationship may be. The difficulty, I think, is only one of perspective. Seen in a perspective that brings all three features into view simultaneously, institutionalism appears clearly as a single intellectual massif, and as such a significant part of the whole intellectual landscape of our time.

II

Institutionalism has been identified with behaviorism as long and as consistently as it has been identified at all; and over the entire span this association has been a source of general puzzlement. It has been recognized as a fact that institutionalists demur at the psychological assumptions of classical price theory, and that they propose to make somewhat different assumptions. But exactly what is the difference has remained obscure.

That obscurity has been due to various circumstances. As is usual in such cases, the criticism of the classical conception of human nature has developed bit by bit and has seemed to apply to the details of price behavior: the excessive rationality which classical price theory has seemed to postulate, the hedonistic flavor of the traditional conception of wants, the teleological implications of the "invisible hand," and all that sort of thing. Even when criticism has been wholesale, it has too often been couched in terms of "the eighteenth-century climate of opinion," a characterization which is bound to seem opaque to all denizens of the twentieth century.

Meantime, the word behaviorism has also proved confusing. As

---

[5] See C. E. Ayres, "The New Economics," *Southwest Review*, Summer, 1948, pp. 223 ff.

INSTITUTIONAL ECONOMICS

THE CO-ORDINATES OF INSTITUTIONALISM

By Clarence E. Ayres
University of Texas

I

The word institutionalism has been in general use for something more than thirty years as the standard designation of a certain way of thinking in economics or approach to economic problems. However, the development of that way of thinking covers a much longer time span. If there is any one point of general agreement with regard to institutionalism, it is that of the pre-eminent influence of Thorstein Veblen; and this circumstance alone extends the period of development of this way of thinking in economics at least to the closing years of the last century.

But Veblen did not appear in a cultural vacuum. As time passes, it is becoming increasingly clear that his ideas form a part of a considerable stream.[1] I do not think that I can be accused of having failed to give Veblen his due, even if I declare that an institutionalist has quite as much to learn from John Dewey and the instrumentalists as from Veblen and his interpreters. Moreover, I agree with those writers who see in Veblen's ideas, no less than those of Dewey, a development of the empiricism of C. S. Peirce[2] and a response to Darwinian evolution[3] and to the infant science of cultural anthropology.[4]

Institutionalism itself does not exist in isolation. The same intellectual influences and the same pattern of social events which have given direction to institutionalism have also produced other developments, seemingly unrelated in origin and early development but clearly consonant with institutionalism, and lending greater significance to it as they also derive greater clarity and deeper perspective from institube expected to take long-run costs into account, and if not, what should be done about them?

---

[1] See Allan G. Gruchy, *Modern Economic Thought: The American Contribution* (New York: Prentice Hall, 1947); Joseph Dorfman, *The Economic Mind in American Civilization* (New York: Viking, 1949), Vol. III; Morton G. White, *Social Thought in America* (New York: Viking, 1949).

[2] See Stanley M. Daugert, *The Philosophy of Thorstein Veblen* (New York: King's Crown Press, 1950); also Gruchy, *op. cit.*, pp. 32 ff.

[3] See Richard Hofstadter, *Social Darwinism in American Thought* (Philadelphia: University of Pennsylvania Press, 1944).

[4] For a recent discussion of a related factor, see Louis Schneider, *The Freudian Psychology and Veblen's Social Theory* (New York: King's Crown Press, 1948). See also John S. Gambs, *Beyond Supply and Demand: A Re-appraisal of Institutional Economics* (New York: Columbia University Press, 1946), pp. 47 ff.

Commonly under a consumer directed economy the price paid for a commodity covers only the proximate or immediate costs of its production. Such underpayment may continue for long periods. For example, so long as individual workers fail to realize clearly the injury to eyesight or to general health connected with a given occupation, they may continue to work at a wage no greater than obtainable in a less hazardous occupation. When finally a worker is dismissed in broken health, he must be supported by relatives or social agencies and the cost of such support is not included directly in the price of the commodity on which he worked.

Other cases are similar. Overcropping of farm lands or permitting soil erosion to occur may stem directly from consumer sovereignty, with resulting impoverishment of posterity. The lure of low costs with which to compete for consumer's favor has led to wasteful use of natural resources some of which either are irreplacable or to be replaced only at high cost. In a pioneering, rapidly growing economy some of such waste perhaps is justified in the interest of consumer sovereignty. As an economy matures and the ratio of men to resources increases, greater care must be paid to long-run costs lest the doctrine of scarcity make economics truly the dismal science.

I lay claim to the title of individualistic liberal: I believe, that is, in the moral values of consumer sovereignty and the responsibilities which it implies. As I reach upper middle age and look back over merely one life span, however, I realize that my grandchildren soon will be the decision making consumers. Their sovereignty well may be impaired unless long-range costs are paid currently. Part of our problem, then, is to discover the fields in which private enterprise, catering to present-day consumer sovereigns, may fail to perpetuate to posterity the resources of the commonwealth. For those cases a degree of restraint and even of government planning (horrid word!) not only is to be tolerated but welcomed.

magazines, and radio broadcasting. In the case of the movies, the box-office receipts furnish essentially the entire revenues of the industry. In that sense, consumer sovereignty prevails. With magazines, two products are sold: the magazine to consumer-readers and advertising space to producer-sellers. If the consumer-readers had to pay enough to cover all costs—that is, to direct fully the resources devoted to magazine publication and distribution—it is pretty certain that less of them would be published. With radio broadcasting the consumer-listener pays none of the cost directly. Something quite different from consumer sovereignty directs the use of resources. The consumer puts his time against the enjoyment of the program, to be sure, but not his money income.

Consumer sovereignty is much more direct, in fact, in the case of government-built highways than in that of private radio broadcasting. Most of our highways are paid for with gasoline tax funds. These, in turn, are furnished by the users of the highways roughly in proportion to use. To be sure, highway commissions decide what roads are to be built in keeping with a total budget; but so do private corporations decide among different varieties of their products without requiring from each the same contribution to common costs.

There are records of some municipal liquor stores that have charged monopoly prices and used the revenue for other city services. There also are records of municipal light departments that have balanced their prices and costs quite as closely as any private companies, thus giving consumer sovereignty full play. So we see that the chance for consumer sovereignty is not limited to a private enterprise economy, nor is it always associated with private enterprise even when the private business is not monopolized.

Consumer sovereignty is limited in our economy to choices among goods and services offered for sale by producers. You and I may choose from the existing inventory, but we can go outside it only when we can indulge ourselves with custom-made articles. We may choose between a necktie and a box of writing paper, to be sure, but we may not find the color of necktie we really want—and if we do not there is little we can do about it. Mass production for mass tastes is the order of the day, and the individual who wants to be different finds his sovereignty curtailed sharply.

A further abridgment of consumer sovereignty results from commercial advertising—a point which Professor Hildebrand relegates to a sentence, doubtless because of lack of time and space. To be sure, there is some element of consumer choice left us after the blandishments and cajolery of magazine, newspaper, billboard, and radio, but the continuous use of the categorical imperative has dulled it badly. The will to resist has its limits. So we have, actually, an admixture, not only of government and consumer sovereignty, but a rather liberal portion of producer sovereignty as well. Anything short of a hundred per cent consumer-co-operative society, perhaps, would fail to give the consumer defense against the barrage of sales promotion undertaken in the interest of people as producers rather than as consumers. One might ask which abridgment of consumer sovereignty is worse or greatest: that imposed by the whisky advertisers or by compulsory attendance at the public schools?

My second point is to raise the question whether consumer sovereignty can totality. Nevertheless, it is important to bear in mind that knowledge for the most part grows by tiny increments.

It is true that economists in performing their professional responsibilities cannot avoid value judgments; yet I contend that they are in no better position than other groups of citizens to assign values. Their responsibility is to develop analytic techniques and to use them in revealing tendencies so that social action insofar as possible be taken with knowledge of outcome.

ROLAND S. VAILE: As I understand Dr. Bowman's paper, she sees two principal antagonists for the consumer: size per se and the welfare ethics. Size—whether it be of private capitalism or state socialism—permits monopoly-like decisions which may either thwart the consumer's direct choice or lead to dismissal of employees and thus to unemployment—especially to unemployment of human resources. Her second problem is that of welfare ethics and she poses the question: "On what grounds can one justify any given distribution of income?" We once believed that the individual's contribution to the satisfactions of consumers was an adequate basis, but many now question its adequacy on the grounds that the equality of opportunity on which it was predicated does not exist in fact.

These problems are very real and must lead us to ponder the effectiveness of consumer leadership. Perhaps we should remind ourselves at this point of the old adage, "Where McGregor sits, there is the head of the table," quite regardless of political or economic organization. Consumers in the mass are likely to follow rather than lead. Those who landed at Plymouth Rock were the exception, not the rule.

Professor Hildebrand predicates his discussion on the assumption that "consumer sovereignty becomes one of the explicit ends that define the optimum in welfare economics. . . . The supreme good involved in consumer sovereignty as a value is the act of consumer choice itself, not the constellation of economic ends so obtained." With this we have no quarrel. He goes on to say, however, that absolute consumer sovereignty means philosophical anarchy and that a vigorously defined conception of consumer sovereignty as an end calls for a hypothetical world that is only imperfectly attained in fact and that few of us would want such a world anyway. With this, also, we have no quarrel. Professor Hildebrand hastens to admit that some abridgment of consumer sovereignty is necessary, perhaps even desirable, certainly already here. He goes on to caution, however, that each case of abridgment should be considered carefully before it is adopted, lest we give up more of real value than we gain. In other words, our practical problem is to find the point at which to "balance the economic controls," to borrow a title under which I wrote a little book some fifteen years ago.

There are two points that I should like to add to Professor Hildebrand's discussion. First, some comments on present nongovernmental abridgments of consumer sovereignty and, second, some comments on long-run versus short-run effects of consumer sovereignty.

Even where goods of private origin are sold in the market place, consumer sovereignty does not control completely. Take, for example, the movies, come distribution of a society is likely to include reference to levels of consumption. But the consumer in this sense has no place in the development of analytical concepts used by economists with the possible exception of underconsumption theories. Value judgments concerning low-level consumption of selected groups of people have a dominant place in the paper and seem likely to constitute the major impression left with readers.

Shifts in the use of the concept of "the consumer" make demands on the agility of readers. The discussion of ideas of Ricardo and Mill as to the "iron law and the wages fund" is entitled "The Unfortunate Consumer." Here the concept relates solely to the incomes of what, at that time, was probably a rather unimportant part of the total population. Very soon the reader meets "The Consumer Enthroned," wherein it is pointed out that economists have finally recognized that consumer preferences underlie market values. The consumer is here a group recognized as having an important role in the organization of the economy, and income distribution is taken as given. The next topic is entitled, "The Monarch at Bay." Under it is reviewed the growing recognition of the existence of monopoly and its implications for consumer sovereignty. Here the reader may wonder whether he is being told about an advancement in knowledge as to the nature of the prevailing organization or about a change in values. In the succeeding paragraphs, the use of the concept "the consumer" shifts to describe those whose rights to consumer goods are restricted by inequality of income distribution.

The attention given to income distribution is doubtless responsible for Miss Bowman's omission of aspects of consumption important in the development of analytical models of economists. She might, for example, have traced the assumption of rationality; the effects of the growth of an industrial economy on the concept of individual versus collective needs; the impact of changes in the organization and cost structure on the meaning attached to freedom of choice; the shift from accepting wants as given to a recognition that they are highly dynamic and that they can be induced through the use of resources that analytical models had formerly assumed were used to satisfy wants; the modifications that have occurred in ideas about the relation between standards of living and population growth; the current place of standards of living in wage decisions; the dynamics of demand with special attention to the introduction of new goods and changes in prices, income, and consumer credit; changes in types of consumer goods that have had a bearing on business fluctuations; the recent rise of interest in the bearing of consumption on productivity which is somewhat akin to the early concept of productive and unproductive consumption; the impact on savings of the changing family structure and responsibilities; ideas of progress and the conceptual aspects of consumption involved in its measurement.

Miss Bowman will find wide agreement with her emphasis on the need for economists to join with other social scientists in finding answers to many questions being put to them. At the present time, for example, economists, especially those interested in understanding consumption, feel the need of greater knowledge of social psychology. Economic analysis abstracts certain relationships and thus can never provide a complete explanation of phenomena in their

Extensive rather than intensive treatment of ideas was called for, covering a whole battery of concepts through more than two centuries. Her presentation will, I am sure, lead to an increased awareness of an important stream of ideas. Her dramatic style of exposition seems likely to leave with many people certain catchy phrases even when the sequence of her ideas is forgotten.

I must confess to having encountered difficulty in understanding parts of Miss Bowman's paper. I do not, for example, know what is meant by "utilitarian" concern for the level of living of the masses, especially as an aspect of the effect of consumption on the labor supply. Nor do I know what is meant by "scientific" socialism. Haney, in his *History of Economic Thought*, describes other kinds of socialism but not this. I do not know what is meant by the polar extremes of liberalism which sets off Mr. Knight against Mr. Lerner. What is meant by puppets of a bureaucratic government, when government action by its very nature is supposed to effect a change in the interrelations of some parts of society? Reference was made to "pseudo democracy." "Pure" democracy is an analytical construct that has never been achieved in actuality, and no one expects that it ever will. Neither has pure competition. The "common man" also is referred to frequently. Since Miss Bowman has made him inseparable from the consumer, it would seem important that his identity be made clear. But to me it was not.

In a sketch such as Miss Bowman has presented, the brevity necessitated by scope to be presented in one paper introduces difficulty. Statements describing situations and representative values which are important in interpretation are likely to be taken out of context. For example, Miss Bowman appears to base her conclusion that the consumer was servile during the mercantilist period on attitudes toward wage earners implied by comments of employers. She did not note that these might well have been utterances of managers of American firms currently operating in Central America and Africa. Here, too, patterns of an industrial economy on the side of both labor and consumption are being established. Did the statements quoted indicate servile consumers or difficulties encountered by employers because of habits and traditions that attached little significance either to the wages offered or to the consumer goods which these wages would buy? There are some grounds for attributing the problem of employers to the independence of consumers.

In order to follow the historical review presented by Miss Bowman, it is important to keep separate fact from value, what is or what tends to be from what ought to be, and to recognize that the word consumer has been used in two quite different meanings. Consumers are, for example, all people in their capacity as users of goods in ultimate consumption. In a capitalist economy, their market selection affects relative values and in turn allocation of resources. In addition, Miss Bowman uses the concept to refer to a group of income recipients who for one reason or another get a small share of the total product. Her paper is not entirely clear as to whether they have other characteristics. She frequently refers to the laboring class—presumably industrial wage earners. These of course varied greatly in importance over the period covered. Such a topic would be highly appropriate in a review of "Income Distribution in the History of Economic Doctrine," and an appraisal of in-

DISCUSSION

Margaret G. Reid: Mr. Hildebrand first examined the ethical value of consumer sovereignty. In doing so he considered (1) whether the "value scale established by consumers through the market ought to determine both the allocation of resources and the distribution of goods"; and (2) whether freedom of consumers to choose is good even if the goods which they choose are not. He expresses belief that consumer sovereignty can be justified chiefly because "choosing by the mass of men develops an uniquely desirable sort of character." He feels that it is difficult to defend the contention that the individual is the best judge of his own interests. In this way he, in my opinion, virtually presents no case at all for consumer sovereignty as he defined it, but merely for freedom of choice as opposed to rationing, for example—a freedom that can exist in a socialist economy. If by freedom of choice Mr. Hildebrand means freedom to allocate resources in general, this fact is not made clear in his discussion. Many benefits claimed for consumer sovereignty are not unique to it.

In explaining his doubt as to the wisdom of consumers, he points out that a benevolent philosopher king might know their interests best. This is an unsuitable comparison. Rational consumers only should be compared with benevolent philosopher kings. They are about equally rare in the respective universes of actual consumers and kings—past as well as present. Later in his paper, Mr. Hildebrand expresses concern lest zealots gain power and impose their standards on society. Mr. Hildebrand does not consider what Professor Frank Knight looks upon as the major problem of choice; namely, the discovery of better wants.

In the initial evaluation of consumer sovereignty, Mr. Hildebrand does not point out that the value scale of individuals may lead to unsatisfactory conditions in a society because individuals are not entirely separate consumption entities. He does, however, take this fact into account in his later appraisal. In his discussion of abridgment it is rather surprising, in view of much sumptuary legislation of the past and current policies as well, that he does not explicitly mention action taken to maintain the demand of certain producer groups. In addition, little attention is given to regulations designed to maximize consumer sovereignty. Under the heading "Protection of the Consumer," he points out that restriction of misrepresentation and fraud aids consumers in getting what they want. It would seem well, however, to set up a separate category for these rather than have them joint with the control of narcotics the purpose of which is to prevent some consumers from getting what they want and others from getting what they think they want.

Mr. Hildebrand closes with the sentence: "Consumer sovereignty and the liberal system therefore stand or fall together." This is a sweeping statement. The facts and analysis of the paper do not support it. All abridgments are not equally important. It would seem well to recall that the liberal system emerged and flourished with many handicaps on consumer sovereignty.

Miss Bowman's assignment was very different from that of Mr. Hildebrand.

intellectual in terms of the guilty lovers in Dante's *Inferno,* loathing yet eternally tied together, is thus still valid. For if the bourgeois attempts to discipline the intellectual by invoking political power, he will soon find the political power turned against his economic freedom. And if, on the other hand, the intellectual tries to discipline the bourgeois by invoking centralized power, he will soon find this centralized power creating so strong an orthodoxy that the intellectual will lose his dearest right—the right to think up new theories and propagandize them.

porations, and that by taxing the wealthy or the corporations we can automatically produce not only enough money for any purpose but also enough food, clothes, factories, and munitions. Such a myth could not exist under socialism and not because socialism is necessarily equalitarian. In 1940 the Russian income tax ran to a range of 1 to 50 and if we add to this the inequalities of perquisites, it is probably even more concentrated.

Socialist economies, I suggest, would probably have less reason, or be subject to less pressure, to resort to specifically war controls than capitalist economies—and this not because the socialist distribution of wealth could be theoretically more "equitable" or because a great part of industry under the socialist state is public anyhow. War controls *qua* war controls in our society are very largely urged for a reason which a socialist economy would, I believe, fairly quickly detect. Production controls are obviously necessary in order to make quick decisions during a war. Price and wage controls are also a valuable second line of defense. But they are no substitute for fundamental action. It seems to me that a good deal of our present cry for price stabilization and so on is largely an attempt to sprinkle rosewater over a skunk. The skunk is that if the United States is to fight successfully an all-out war, the standard of living of all of us, both rich and poor, will have to go down very much. I cannot help thinking that eight-tenths of the present cry for a stabilization program comes not so much from those who stress its genuine but subordinate helpfulness as from an attempt to avoid, through controls, the basic abstinences which everybody ought to know must be directly borne somehow. As usual, we will, of course, probably impose upon the fixed income groups and the lower income groups by inflation the burden we dare not impose by taxation. The gain in "justice" is scarcely apparent.

Thus it may be that a socialist economy by eliminating some of the misunderstandings which warp our understanding of the economic process under capitalism might give a greater efficiency in the short run. Socialist economists would scarcely try to reconstruct economics by universalizing a deep depression model in a time of high inflation. Socialist economists would have access to the figures (but for that matter we do, also) which would show, as a matter of simple arithmetic, that we cannot fight a war without lowering the standard of living of everyone. The conflict of individual and social welfare would be more clearly brought into focus.

But, on the other hand, these short-run gains would, in my opinion, be infinitely overbalanced over the long pull by the routine-minded and stagnant centralization which a security-conscious socialism would almost surely imply. Schumpeter's picture of the bourgeois and the have—can be successfully combined with a democratic state, but lack of space compels me to refer my readers to *Democracy and Progress* and *Capitalism.*

Some of the political scientists, however, have maintained that centralized planning is not a necessary part of socialism. This is true—if one is to take a stationary outlook and not to permit change. But here we reach the nub of the whole problem. My thesis for years has been that if we make men free, they become creative and if they become creative, they create trouble. The formation of novel conceptual valuations is an inseparable part of the dignity of free human beings. Just turn men loose from the bonds of customary routine, and they will commence to invent laborsaving devices. As soon as they commence to invent, then the problems of growth and pressure groups step in. Accordingly, I suggest that such a stationary state as the back-to-the-land people and so on envisage, must have in the background a ruthless technological inquisition; so that all people with new technical ideas will be quietly or forcibly eliminated—before they have had a chance to express them. Thus the static ideal, which superficially looks more stateless and superficially appears to have less conflict than the dynamic one, actually involves far more ruthless suppression and more bitter frustration than does the ideal of dynamic process.

We have dealt thus far with things which socialism cannot do. It would not be fair to close without mentioning some of the things which socialism might possibly do. It seems to me from a purely economic and purely short-run point of view that socialism might be a more efficient engine for a while because it brings the problem of social interest more directly into focus. In other words, the socialist framework, unless the bureaucracy deliberately conceals the facts, may possibly enable us to see our problems straighter. The tendency under capitalism is to identify the cause of a social force with the men who are reflecting its influence. In other words if inflation causes high prices we say that the high prices are the work of the businessmen and not of the overissue of money. Also we fail to relate individual conflicts with social conflicts. For example, if the railroad workers strike against the railroad in time of war, they may perhaps think that they are only inconveniencing the railroad owners rather than that they are imperiling the safety of the state. Such a misunderstanding would not be possible under socialism; but it must be pointed out that workers have, nevertheless, struck repeatedly against the state in socialist societies. I do not share Mr. Tawney's optimism in this regard.

Another great myth which grows up under capitalism is the notion that there is somewhere locked up a great store, not merely of money, but also of real wealth, in the possession of the wealthy or the corcapitalism, nevertheless does not present the choice in adequate perspective.

It will be seen that the philosophical position taken in this paper is that the aim of social organization should be "not satisfaction but better wants." The only logical alternative is oriental yogism. But we have also seen that a socialism, which is growing, inevitably will experience changes in wants and inevitably encounter conflict of interests and pressure groups, and that it cannot combine growth with serene routine. And so we must ask whether socialism *qua* socialism has any qualitative standard whereby we can judge which of new wants are "better." Here I think we are bound to give an unqualifiedly negative reply. There is nothing in Marxian philosophy, Stalin to the contrary notwithstanding, which would tell us whether Picasso is better than Titian. Nothing in the writings of Norman Thomas will enable us to discover whether "Way Down upon the Swanee River" is better than Prokofieff. The whole problem of better or worse which is, as far as I am concerned, *the* problem of civilization, is one with which economic institutions and economic analysis are wholly incapable of dealing.

Let us turn now to the distribution of economic power. I shall define economic power as the ability to influence mankind in its production routines and not merely as the ability to influence the consumption patterns of society. The modern radical is apt to put his entire emphasis upon the distribution of income, and to stress the resulting "disproportionate" influence upon the direction of production which some wealthy people will have. He does not follow Hicks and Hart in pointing out that we achieve little if in eliminating inequality of income we increase inequality of power. But my thesis is that precisely just such an increase in inequality of power is involved in the nature of the socialist setup—if it is to be a growing one and, what is less generally recognized, still more so if it is *not* to be a growing one.

We should all, I think, be very grateful to Lord Beveridge for spelling out so thoroughly the economic requirements for an advance guarantee of absolute stability in a growing system. As Beveridge shows in his *Full Employment in a Free Society,* it is virtually impossible to be sure in advance that the total of change will always add up to "full employment," whatever that may be, unless we set up a board of traffic cops to control the flow of net new investment. Of course we do often have full employment without such measures. But to be always sure, there will have to be a "queuing up" of inventions. Such a board, however, will possess immense economic power over the future of every town, every industry, and every individual in a state. For myself I do not believe that such tremendous concentration of power—far greater than the concentration that any capitalists now we achieve a world of literal economic equality, still there will remain a host of noneconomic sources of friction. The instinct of workmanship is not always a productive force. Quite the contrary. Some men merely love to apply and repeat a given set of skills indefinitely. They will deeply resent any attempt to change them into other jobs. Some people come to like a given community or a given group of friends and here, too, one finds conflicts with growth, for it is the essence of the growth problem that it involves a constant reorganization and reallocation of the resources, human and otherwise, of society. Some regions will go up and others come down. By going up of course I mean merely increasing in activity, for presumably if one has an "ideal" social situation, the economic income per head would remain the same. Nevertheless, some regions will become more important and others less so; some individuals will become more important and others less so. The law of variable proportions is no invention of capitalism.

The failure to consider the socialist framework in its growth aspects is also responsible for another naïve notion of modern society; namely, that the businessman is responsible for all changes in wants. Veblenism in its crudest forms seldom gets beyond "beer and a wench" as the idea of consumption. But even in its most refined versions, it is nevertheless supposed that people having once attained a certain stationary level of consumption will not thereafter form new desires unless they read advertisements in the newspapers.

This point of view is incredibly innocent. A man who has been drinking a bottle of beer will not, when society's income rises and with it his per capita share, simply drink a barrel of beer. The chances are that he will shift in part to some other drink. If people have been living in one small house, they are not going to jump simply to two small houses. The type of house occupied by members of a social system will change. Thus growth not only comes through change but also it induces change, and this would be the case if there were never a single businessman anywhere on the horizon.

It will be found, I think, that in practically every case in which socialism and capitalism are compared to the advantage of socialism, the comparison is really not a contrast between the socialist and the capitalist institutional setup, but between the dynamic and the static society. Virtually all treatments of the problem tacitly compare stationary socialism with growing capitalism. Even my lamented master, Schumpeter, for all his insight, is guilty of this methodological slip. "Capitalism, Socialism and Democracy" greatly underestimates the problem of growth and almost wholly overlooks the difficulties of reallocation and of pressure groups which that growth would imply even under socialism. Thus Schumpeter, I believe, for all his loyalty to much modern sociological, anthropological, and economic literature it is assumed as self-evident that such a society of peaceful repetition is the obvious social norm. We have here one of the basic cultural cleavages of the human race and a choice which, in my opinion, underlies the final rivalry of capitalism and socialism.

There is something about the idea of endless change or constant progress (if one may call it such) which is very horrifying to a certain type of mind, especially the immature mind. Behind the various blueprints of socialist society lies always a search for a single static ideal which once attained may thereafter be repeated indefinitely. But, as William James remarked, a man does not achieve maturity until he realizes that the only permanent thing in life is change. And, as Whitehead points out, there can be no real halt to civilization "in the indefinite repetition of a perfected ideal. Staleness sets in and this fatigue is nothing more than the creeping growth of anaesthesia, whereby that social group is gradually sinking toward nothingness."[1] Because we see the problem of conflict emerging today in such monstrous forms and with such horrible consequences, we are apt to react with the assumption that conflict is necessarily bad. But, again, as Whitehead points out, "progress is founded upon the experience of discordant feeling. The social value of liberty lies in its production of discords. There are perfections beyond perfections. All realization is finite and there is no perfection which is the infinitude of all perfections. Perfections of diverse types are among themselves discordant. Thus the contribution to beauty which can be supplied by discord, in itself destructive and evil, is the positive feeling of a quick shift of aim from the tameness of outworn perfection to some other ideal with its freshness still upon it."[2] Referring to Greek art, he says, "perfection was attained and with the attainment inspiration ended."

But even if we accept for the moment the static ideal of smooth, unvarying routine, it will be found that it also collides, not only with certain notions of vitality and cultural freshness, but also with the notion of rising output per head; and here, as I have often said, is one of the most basic contradictions of our society. We are at one and the same time crying for the rapid rise of output which industrial society has given us and yet also for the secure routine of the hermit. These two aims are always somewhat incompatible.

One of the most optimistic and most fallacious of the claims for socialism is that it will avoid all pressure groups and conflicts. I have repeatedly discussed the fallacies involved in this point of view and will only briefly run over the argument here. Even if we suppose that

---

[1] A. N. Whitehead, *Adventures of Ideas* (Macmillan, 1933), p. 368.
[2] *Ibid.*, pp. 330-331.

THE DISTRIBUTION OF THE PRODUCT AND OF ECONOMIC POWER UNDER SOCIALISM

By DAVID MCCORD WRIGHT
University of Virginia

To speak on distribution under socialism is rather like being asked to speak on distribution under Christianity. That is to say, there are as many different kinds of socialists as there are different kinds of Christians. For example, now that the word socialism has become relatively respectable, a determined effort is being made by communists and near-communists to use the word as a propaganda screen for their particular kind of Marxism. Thus we find the word socialism embraces a spectrum of political opinion ranging from Leninist communism on the one hand all the way down to simple back-to-the-land advocates on the other. There is no single economic system which can be described as official socialism.

But in addition to the ambiguity of subject matter, there is an additional conflict regarding methodology. I might make an elaborately mathematical speech discussing such questions as whether or not the state redistribution of the national dividend should be in lump sum or proportional, whether the marginal cost rule shall prevail, and so on. But it has long been my contention that analysis of this sort is, to put it most charitably, desperately incomplete. The scientific pretensions of welfare economics have in my opinion almost completely collapsed and the final obsequies have been performed by Mr. I. M. D. Little, of Oxford University, in his brilliant *Critique of Welfare Economics*. There remains an ethical prejudice in favor of equality in one or another of its many aspects, but the claim to be able to state scientifically that equal income distribution, let us say, would result in greater happiness or greater satisfaction is, in my opinion, completely worthless.

In this paper we shall, therefore, leave to one side very largely the question of quantitative distribution of the product and talk instead about the effects of socialism upon its qualitative nature. It is there I think that the most valid case can be made out. For if socialism has any claim for superiority, it would have to lie in the cultural and aesthetic field. In other words, it might be maintained that socialism would produce more sensitive and more aesthetic individuals.

Many schools of economics, however, especially the institutionalists, confuse the aesthetic with the technological. They hold as their ideal a state of unchanging routine or of an absence of overt conflict. In personal responsibility, and creative spontaneity. It views the state as one useful form of human association, having specific functions and limited powers within the much larger context of civil society itself. It rejects the narrow collectivist dogma that the state and society are one and the same thing; that all important decisions are political decisions. Consumer sovereignty and the liberal system therefore stand or fall together.

superior in competence take several forms. Abandonment of the market in a major way means loss of the discipline of economizing. No set of officials can be expected to economize as effectively as private individuals under the rule of the market. Waste is inevitable and will show up in reduced supplies of alternative products. Further, substantial co-ordination of activities by political coercion is inherently a cruder and less efficient form of social organization than co-ordination by price. Political decisions become so numerous, so complex, and so interrelated that there is neither time nor mental capacity to formulate them intelligently. In contrast, the market economizes knowledge and achieves a complex type of co-ordination with minimum demands upon human powers and with minimum coercion of human beings.

The purpose of political organization is to hold society together, by legitimatizing coercion. Coercion requires concentration of power. It gives the few the power to tell the many what to do. It is inseparable from some suppression of individual spontaneity and differences, even in the mildest forms of the state. Totalitarianism is simply the generalized application of this principle of political coercion. As Knight has observed, the Marxist believes that reform is the outcome of systematically applied force. This is statism in its ultimate form. All life—private and social—becomes political life; that is to say, endowed with political significance and dominated from above. *Nineteen Eighty-four* is the perfect description of the result. The problem, then, is to define the limits within which this political power may be legitimatized for the pursuit of acceptable purposes. To use the adjective "acceptable" is of course to beg the question. Limits cannot be set up without specifying certain ends. Consumer sovereignty is such an end. To adopt it in its conditional version is to favor retention of the market wherever possible and to look askance at the expansion of the central political organization. Limits to such expansion are desirable if individual spontaneity, differences, and self-government are desirable. These limits cannot be defined precisely. They are less an exact line than a band. Within this band there can be differences regarding the scope of the state. In the liberal view, however, the band has an outer edge. Small actions in themselves give rise to tendencies that transgress the outer edge. If we would preserve a liberal organization, we had better know the implications of what we are doing.

The opportunity for consumers to have a broad measure of self-government is part of the liberal idea itself. The liberal view is wholly compatible with some state protections and functions, but its primary emphasis is upon the development of individual capacities for self-government in all domains of life. Liberalism stresses a certain conception of human character: self-reliance, self-denial, independence,

III

Today's retreat from consumer sovereignty is not, of course, in every instance a calamity, even from a liberal view. Consumer sovereignty is not an absolute, and the market is not an instrument for perfect justice. Yet certain tendencies are at work in modern life whose larger implications are disastrous to a liberal view of economic organization. They represent abandonment of the market. Their principal causes lie in *ad hoc* measures to overcome poverty by subsidized or free distribution of goods and in the attempt to conceal inflation by direct state controls. The issue is not whether the reduction of poverty or the prevention of inflation are good things. They are. The trouble lies in the means proposed. They are inadequate for the purpose and they threaten other values.

Individual consumer sovereignty and the market go together. The market is the means by which men express their individual wants. It permits variety and makes differences of tastes effective. The market also imposes an impersonal kind of discipline. It induces the consumer to economize his use of scarce goods and the producer to economize his use of scarce resources. Scarcity is man's lot on earth. This discipline is a way of making things go further. The abandonment of the market means loss of the necessary self-control that scarcity imposes. It is the "Open sesame!" to waste. It means sacrifice of the power of consumers to influence the economic process. And it means that political coercion must take over the co-ordinating function of prices. The officials replace the consumers as choosers.

If this transfer of power to political officials is to make any sense at all, it must rest on the assumption that the officials are more competent to do the choosing. They must demonstrably be more capable, better informed, animated by a higher concern for the collective interest, and endowed with the requisite time to make intelligent and responsible decisions. To state the principle this bluntly is to recognize both its possibilities and its limitations. Little exception is likely to be taken to it in the case of specific sumptuary measures clearly involving collective health and welfare and clearly supported by general consent. Probably, too, the telescopic faculty is sufficiently general to warrant some forms of compulsory saving. No doubt also there are essential public goods calling for state provision free of price. But when we go beyond these cases, difficulties begin to pile up and questioning the capacities of the philosopher kings is in order. Merely to raise the questions these days is to invite the charge that one favors poverty and injustice.

Doubts regarding the assumption that public officials are generally brought together by voluntary co-operation in a decentralized system of markets. Large-scale direct controls are thus a collectivist move, and should be so regarded. Prices frozen at historical levels at once begin to lose their meaning as indexes of relative scarcity and so lose their functions as an allocating and rationing device. All the pressures formerly reconciled voluntarily by the market now become focused upon the officials, and the initially broad principles of direct control soon give way to a detailed mass of *ad hoc* decisions. Producer group rivalries become expressed in a struggle for the control of the state, and the resulting injustices lead to distrust of the whole system. Output is sabotaged directly by large-scale use of manpower for regulatory purposes, and indirectly and more effectively by the delays inherent in red tape and the inevitable shortages of men and materials. The more obsolete the frozen price structure becomes, the greater the danger that the public will ultimately lose confidence in the value of money and the apparatus will break down. In wartime this denouement may be delayed by a patriotic unification of interests against a common danger, so long as there is hope of victory. In peacetime the difficulties of maintaining the system by popular consent are enormously greater.

We have a choice between a broad program of direct controls and fiscal-monetary measures for stabilizing employment and the price level. In wartime, drastic reallocation of resources and severe reductions in supply of essential civilian goods might justify direct controls, though even here the case is not beyond challenge. In peacetime or in a period of war preparation such as now direct controls are a very dubious policy. They are unlikely to work and they invite all the evils recently noted by Viner: ". . . the absenteeism, the unpenalized inefficiencies, the padded personnel in plants, the upgrading for pricing and downgrading for quality and service, the queues, the bottlenecks, the misdirection of resources, the armies of controllers and regulators and inspectors. . . ."[7]

In a word, direct controls lead straight into centralized planning and are incompatible with consumer sovereignty as an end. However, the fiscal-monetary approach has its own difficulties, for it presents the hard choice between deflation and open inflation. We cannot then go all-out for full employment at all times unless we are willing to permit open inflation. If we would avoid open inflation, we must be willing to risk some deflation as a countermeasure. To those who prefer consumer sovereignty and the price system to centralized planning, the risk will be worth taking.

---

[7] Jacob Viner, "Full Employment at Whatever Cost," *Quarterly Journal of Economics*, August, 1950, p. 391.

of income inequality. If they are provided free of price or at subsidized token prices supported by tax-financed deficits, economies of production cost and of consumption are likely to go by the boards. Here the tragedy is that housing and medicine, obviously good in themselves, can be provided in greater measure without sacrifice of the discipline of the market, while greater income equality can more easily be pursued directly by revision of the income tax. Unfortunately, the drift of the times favors increasing waste of scarce resources, and the beneficiaries of state provision know not what they give up.

To sum up, the range of state services is elastic and there is frequently a choice between provision at cost and provision at subsidized prices or none at all. The course of development will depend, then, upon the social philosophy that prevails. Growing hostility to the market—because it does exert discipline—and increasing preference for economic equality at all costs here combine to promote a persistent movement toward centralized physical planning. What may be desirable in a small way may well prove disastrous in the large.

4. *The Concealment of Inflation by Direct State Controls.* My last case of encroachment upon consumer sovereignty involves the attempt to hide the symptoms of inflation by direct state controls over prices, wages, and the distribution of raw materials, manpower, and consumers' goods. I shall have to pass over several important issues and concentrate upon the implications of direct controls for consumer sovereignty.

Direct controls originated in war. Today they are advocated also in some quarters as the necessary adjunct of planned full employment in times of peace. Common to both contexts is state-promoted price inflation, induced by elastic money supply. In the war case, monetary inflation is employed to enable the state greatly to increase its command over real resources and private products. In the peacetime full employment case, the matter is less one of increased state command over resources and products than it is one of easy money and state deficits to finance the full employment of labor at ever higher wage levels and the sale of private products at ever higher price levels. In both cases, direct state controls are applied to conceal the symptoms of inflation, while at the same time increase of money supply is continued as the cause.

Concealed inflation calls for a transfer of most of the functions of resource allocation and product distribution from the price system to a corps of state officials. This transfer requires marked restriction of the sovereign power of consumers to influence the economic process. Having acquired this coercive power, the officials must assume the task of co-ordinating by administrative decree most of the activities formerly instead, without becoming a landlord. There are, of course, serious limits to income redistribution as the road to riches. The trouble today is that everybody wants more of everything, and the real barrier is total production, not distribution.

Considering natural monopolies, it is clear that unrestricted private control will defeat consumer sovereignty by restricting allocation to get monopoly gains. If the service is essential, a case may be made for government ownership, just as a case can also be made for government regulation instead. If government ownership is followed, the state acquires new responsibilities as a producer. The question then becomes: shall the service be priced at cost or provided without price? Since it can usually be shown that the service is "essential," some equalitarians then will argue that the poor cannot conveniently pay for it and will propose that state provision be free of price. In this way the gain for consumer sovereignty in eliminating monopoly restriction is lost by turning over the allocating and distributing decisions to political administrators. I hasten to add that I do not intend to suggest that practically everything privately produced is sold under monopoly conditions, which is the popular belief. Nor am I convinced that nationalized monopolies, even if they do charge prices, are any more likely to observe consumer sovereignty than their private forbears. The French national railways offer a good case in point. The motive, furthermore, is now no longer the elimination of monopoloid restriction. Rather, it is to reduce the inequality of incomes by an indirect method.

We have, then, two categories of public services: one where the market cannot be used; the other where it might be used but often is not. Sometimes the first category is referred to as involving "public goods" and the second as comprising "mixed goods." The broadest possibilities for expansion of state provision seem to center in defense of the realm as a public good and in the category of mixed goods as a whole. Expansion of national defense is obviously now the free peoples' lot in life, if they wish to remain free. Broadened state provision of mixed goods is occurring in two major ways: nationalization of industries (as yet largely a European phenomenon) and efforts to combine the provision of certain essential goods with programs of income redistribution (for example, public housing and public medicine). Consumer sovereignty is likely to be reduced further in all these instances. Growing militarization commonly is associated with inflation, price freezing, and centralized state planning, even though alternatives are possible. Nationalization of industry is an open invitation to syndicalist partial planning, with the usual cost inflation and tax subsidies. Public housing and public medicine are usually tied in with reduction

One category of public services embraces items that must be supplied collectively without price to the whole population if they are to be provided at all. This would include the old stand-bys: national defense, justice, public order, regulatory activities, and probably resource conservation. In these cases the interests of the citizens are clearly inseparable, even if they are vaguely so in many other instances. The services cannot be "atomized" for sale for exclusive private use. All share in the benefits, and even if the service in question could be offered for voluntary purchase on the market, some consumers would choose not to buy it. Yet the need may be clear-cut and the benefits general. To resolve the conflict of private interests and to provide for the public interest where interdependence is obvious, the state is required as a coercive device and collective supplier. None but the philosophical anarchist would balk at the principle. To accept it, however, is to admit at once a fundamental limitation upon consumer sovereignty.

The second category concerns those public services that could be supplied privately through the market but instead are provided by the state with or without prices. Here the difficulties are greater and the course preferred will depend upon one's enthusiasm for public enterprise itself. Public education, for example, is upheld on several grounds: one, that an educated population is desirable; another, that public education is uniquely able to effectuate certain cultural ideals. Both contentions amount to saying that education is an appropriate function of government, to which there would be small exception if a state monopoly of education is not also demanded. There is still another ground: that public education is essential to a broad distribution of educational opportunities. This essentially is an equalitarian argument that properly assumes that the poor cannot pay the full market price for public or private education. Education could be atomized for sale in the market, but on other grounds is made a subsidized state service in competition with private sources.

The controversial nature of this entire category may be made clearer if in addition we consider the cases of public housing and natural monopolies. Public housing is advocated because slums are undesirable and because many cannot buy housing compatible with today's aspirations at today's prices. Both assertions are true, but the conclusion—public housing—does not necessarily follow. Public housing depends on an additional contention: that it is the only way or is the best way to improve the housing of much of the population. If accepted, the state becomes a supplier. Yet it can equally well be contended that what is wrong is the inflated cost of building (monopoloid arrangements) and the distribution of incomes. The state could attack on these fronts "factitious wants." One need not deny the existence of some diversity of tastes to recognize the force played by emulation in shaping wants. Yet the issue involved in plural economic voting does not concern the efficiency of the market as such. The objection to plural voting is an objection to market valuation of productive services because unequal incomes are the result. Here the more serious problems turn upon the ownership of wealth itself. There are ways to reduce the inequalities of wealth by fiscal methods that are compatible with the market. Moreover, it is not true that all ballot votes are equal. The slightest acquaintance with political parties and machines serves to dispel that contention.

Sometimes it is contended that people are more rational as political voters than they are as consumers, because commercial advertising distorts economic choices and fosters ignorance. This view seems to me seriously to underrate the information and analysis underlying judgments consumers make, and at the same time to overrate the rationality of the appeals made by candidates in competition for public office. If false and misleading statements and the systematic inculcation of biases characterize commercial advertising, what is one to say of political speeches and platforms?

Consider also the differences inherent in the two types of choice. Decision of a consumer to spend, even if sometimes misguided, is a direct and responsible act of self-government. Any error of judgment is individually small and usually capable of prompt rectification. By comparison, a decision to vote politically is inspired by a complex of values, and delegates to the victorious party the actual responsibility for a great mass of spending decisions. People vote for such things as generalized promises of benefits whose costs are not ordinarily stressed at election time. Save perhaps for local bond issues, the voters really do not determine the specific forms of expenditure or the specific goods to be acquired. Choices made at the ballot box are large and not usually revocable. Further, they involve a transfer of authority—from self-governing consumers to political representatives. As authorities supplant rule makers in government, consumers lose more and more sovereignty. Public officials do more and more of the actual choosing. However praiseworthy each type of public provision may be, the cumulative expansion of the state may nevertheless be interpreted as a movement toward centralized collectivism. For those who accept at least some consumer sovereignty as an end, principles are needed for defining the limits and possibilities for the expansion of the economic functions of the state. Unfortunately, it is easier to recognize the need than it is to fulfill it, for the only guiding principles I am able to cite are sufficiently elastic to accommodate a variety of social philosophies.

in its power to influence the pattern of production and distribution. With the contemporary growth of the state, the scope for consumer sovereignty has steadily decreased as a derivative result. Two problems then emerge. The first concerns the differences implicit in the two processes of economic choosing: one by consumer sovereignty and the other by political sovereignty. The second involves the criteria by which services might be provided by the state itself, usually outside the market. I shall treat these problems under the assumptions that we do not have a fully socialized economy and that the state is a political democracy in structure.

As the supplier of some given service, the state may charge a price for the output, and price rationing will then distribute the good. The distributive side of consumer sovereignty then prevails. If, however, the scale of production for the item is not determined by cost pricing, consumer sovereignty is not effective in controlling the proportion of resources allocated to the purpose. This of course is also true when production is carried on by private monopolies. If, instead, government output is supplied free of price, there is no way to compare returns with cost, and distribution is independent of price rationing. In this case consumer sovereignty neither controls allocation nor distribution.

One need not question the necessity for certain state services to observe at once two serious weaknesses inherent in the public economy. The eyes of state officials are naturally fixed upon survival and advancement. The objective is to "build up" the agency; that is, to expand its budget and hence its costs. In business, survival demands economizing of costs and expansion of returns. In government, cost expansion is primary, returns secondary; in fact, the incentive is to neglect returns by not charging prices even where they could be charged. The eyes of the users of a government service are fixed upon the benefits to be obtained and not upon the direct sacrifice costs of having the service—costs that are not usually apparent anyway. The result is a "law" of self-generating political expansion that steadily vitiates the economizing discipline of the market.

Dollar voting and ballot box voting, furthermore, are different kinds of choosing, both with their economic impacts. They reflect what F. H. Knight calls our "dualistic order"—the one economic, the other political, with both interconnected.[6] One difference, often emphasized by equalitarians, involves plural voting in the market when there are differences in incomes. The result, says the critic, is a warping of allocation to the production of "luxuries" for the satisfaction of competent to appraise future needs; hence cannot be left to decide for themselves, either in their own interests or in the interests of others who would then be saddled with the burden.

---

[6] For a comparison of the two processes of choice, see Frank Hyneman Knight, *The Ethics of Competition and Other Essays* (New York, London: Harper, 1935), pp. 293-305.

The pure food and drug laws came into being following a melancholy recital of the facts. There clearly are cases where it is impossible for consumers to obtain certain kinds of knowledge essential to intelligent choice, and here they are incapable of protecting their own interests. One cannot enter a restaurant kitchen and by casual inspection insure himself that he will not be poisoned. Nor is there assurance, even if consumer inspection were possible, that society might not suffer from a preventable epidemic. In these situations, competition and market demand are wholly inadequate policing devices. State regulation follows. Yet there is also a kind of regulation that helps the consumer to become a wiser sovereign himself: the control of certain forms of advertising. Palpable fraud can be prevented. Adequate requirements regarding labeling and specifications at least assure some possibility of more intelligent comparisons. Competition itself can do more effective police work if only a minority of marginal consumers get access to more adequate and more accurate information.

Thus the protection of consumers in specific cases, while in certain ways a reduction of sovereignty, can only seriously be objected to from a viewpoint of severe purism. The real dangers in the idea of protection come from a different quarter: the desire of those who have attained political power to impose their standards of taste, not because consumers are ignorant or incompetent and not because momentous social costs are at stake, but simply because freedom of choice may involve some things that are repugnant to those having the power. To paraphrase Lionel Robbins, wise government is not a substitute for self-government by consumers themselves. Coercion can be dangerous when exercised by small minds.

3. *The Provision of Services by the State.* States restrict consumer sovereignty by protective measures that alter the production and distribution of goods. Alternatively they may replace consumer sovereignty by provision of certain goods and services on their own part.

To recognize the necessary existence of the state is to hold that there are certain functions that the state alone can perform or is better able to perform. To carry out these functions, whatever they may be, the state uses its fiscal powers to obtain command of real resources and private products. In turn, the state services may be sold at a price or made available as "free" goods outside the market. Either way, the existence of fiscal powers enables state officials to influence the allocation of resources and the distribution of goods. Once the existence of the state is assumed, therefore, consumer sovereignty ceases to be unique the degree of optimism or pessimism prevailing regarding the intelligence of the population and upon the degree of intensity with which devotion exists to individual freedom as an ideal.

The underlying premises of measures for consumer protection are that certain groups—or in some cases the public as a whole—are not always adequately informed regarding the conditions of choice, or are incapable of appraising the consequences of certain acts, or are unwilling or unable to avoid acts having injurious consequences to others. By reason of ignorance or incompetence, or both together, consumers are not always the best judges of their own interests. The inference follows that consumers cannot be fully sovereign—that they require the protection of a guardian, usually the state. On this basis we have acquired sumptuary laws, compulsory deductions from personal incomes, pure food and drug laws, and some regulation of advertising.

Sumptuary legislation has for its purpose a change in the pattern of production and consumption of certain products, either by direct state control of production and distribution or by specific excises or subsidies. In either case the intention is to alter individual budget patterns to fit what the guardian considers best on the basis of superior knowledge and insight or of concern for the population as a whole. Thus state regulation of narcotics substitutes the physician for the consumer as judge, on the sound principle that a user is likely to become habitual and, as such, an incompetent who will destroy himself and impose costs upon others. Here state coercion is unavoidable, for there is a clear conflict of interest between the addict and the rest of society. In the excise or subsidy case, the coercion is indirect. Relative prices are altered to induce consumers to compose a different budget—for example, to substitute milk and oranges for liquor. Here the consumer remains the judge, but the terms of choice are modified on the assumption that he is competent but requires an additional incentive to consume in the manner desired. Excises that are revenue measures have been purposely neglected. It should also be added that subsidies have been advocated in some quarters as a means of reducing the inequality of incomes.

Compulsory deductions from personal incomes are encountered in systems of social insurance and the withholding provision of the income tax. The persons blanketed in under these measures no longer are allowed to make a completely free decision regarding spending versus saving. The presumption is that freedom of choice would mean that a large part of those affected would not save in amounts sufficient to cover certain future risks and liabilities. There is considerable support for Pigou's view that people have a "telescopic faculty" for undervaluation of the future. This suggests that consumers are not generally issue is usually stated for public discussion. In what ways is consumer sovereignty an issue, and upon what grounds?

II

I have chosen to consider four leading cases in which consumer sovereignty either is already restricted or is proposed for further restriction. All of them involve the state. To be specific, they involve a clash between the economic power of consumers and the coercive power of the state. In so interpreting the problem, I do not wish to be interpreted as holding a priori that there should be no such encroachments. Rather, my purpose is to develop a classification and to relate the controlling criteria to consumer sovereignty viewed as a standard of judgment.

1. *Centralized Socialist Planning.* Regarding this case, little need be said. The old-style socialist planner, animated by an intense dislike of practically all inequality and by a distrust of the price system itself, usually thinks in terms of standardized consumers, uniform needs, utility models, and so on. The inference is inevitable. Let the state determine the production plan, guided of course by nutrition experts and other scientists. Let the state also distribute the product by direct rationing. All of the now familiar difficulties of centralized physical planning then follow. Recently, more advanced thinking regarding the allocation problem has partially reinstated the price system. However, as Lange has shown, it is still possible for the planners to thwart the consumers. They may reserve for themselves all allocation and production decisions, and by keeping two sets of books allow the price system to distribute the product.[5] Clearly the ultimate power in economic affairs is appropriated by the planners. Their motives, their purposes, and their value-scale will control. Retention of the price system as such under a system of socialism is not tantamount to acceptance of full consumer sovereignty.

2. *Protection of Consumers.* To advocate consumer sovereignty as a conditional rather than absolute canon of policy is to recognize that acts of individual free choice are valuable in themselves, but also to recognize that in some circumstances the results of unrestricted free choice may be damaging to the individuals concerned or to others. Freedom of choice offers no guarantee that some consumers will not be fools all of the time or all consumers fools some of the time. The problem here is to find an area of agreement regarding the limits of individual consumer freedom. The solution, I suspect, will depend upon

---

[5] Oskar Lange, *On the Economic Theory of Socialism,* ed. by Benjamin E. Lippincott (Minneapolis: University of Minnesota Press, 1938), pp. 90-92.

upon the choices exerted by entrepreneurs, subject of course to final consumer review. With the passage of time more than one pattern is conceivable under a regime of full consumer sovereignty.

For full consumer sovereignty to exist in fact, certain precedent conditions would be required. Competition must be effective, meaning that prices must be flexible, resources mobile, entry free, and that some consumers must be sufficiently alert and well informed as marginal buyers to police the entrepreneurs. There must be no monopolistic arrangements to warp resource allocation away from the condition that in equilibrium the value of a marginal unit of a factor in each use must equal its alternative sacrifice cost in all other uses.

The political conditions are the more interesting. Since the literal meaning of sovereign is supreme power, consumers are sovereign only when they have full and final power to determine the production and distribution of goods. No individual or group of individuals acting in any other capacity than as individual consumers can have power to alter this determination. It follows that the state could not exist at all, for as an appropriator of private products or real resources in the consummation of its purposes, the state necessarily affects the allocation of resources and the distribution of goods. Any functions customarily performed by the state would have to be undertaken by competing entrepreneurs, selling through the market. Thus absolute consumer sovereignty means philosophical anarchy. There can be no state, because there can be no interference with the distribution of incomes as determined by the market and no collective state provision of any products outside the market. All wants must be serviceable by commodities moving through competitive markets; so that consumer sovereignty—exerted through price rationing and price allocation—is supreme. On De Viti de Marco's principle, there can be no collective wants in this society.[4]

These requirements make absolute consumer sovereignty a purely hypothetical conception and an unattainable moral ideal. Few would subscribe to this ideal unconditionally. Like competition itself, consumer sovereignty never is wholly effective. When we set it up as a purely theoretical construct, as with the concept of perfect competition, we are better able to isolate those elements in actual experience that infringe upon its unrestricted operation. We are also better able to recognize consumer sovereignty as a silent and unorganized kind of social power that even in a somewhat restricted price system exerts much influence upon the economic process. This power of the consumers is at issue in current politics, though this is not the way the organization in which individual preferences are most likely to be effective. It is not necessary to argue in addition the utilitarian postulate that generally the individual is the best judge of his own interests —a difficult contention to defend. Actually it is conceivable that a benevolent philosopher king might know the consumers' interests better than they do themselves. The supreme good involved in consumer sovereignty as a value is the act of consumer choice itself, not the constellation of economic ends so obtained. No assertion is necessary that the ends determined by consumer sovereignty will yield more economic satisfaction to each agent than might be had if the benevolent despot did the choosing instead. All we really say is that choosing by individuals is a good thing, and that this choosing by the mass of men develops a uniquely desirable sort of human character.[2] Thus to advocate consumer sovereignty is to hold a particular view of what constitutes the good life and the good society. The case for consumer sovereignty is formally part of the case for individual freedom itself: that such freedom is good, in and of itself. To be meaningful, a philosophy of individual freedom must stress reflective self-consciousness and the power of self-determination, both of which come under severe restriction in tradition-bound or dictatorial societies.

---

[4] Antonio De Viti de Marco, *First Principles of Public Finance*, translated by Edith Pavlo Marget (New York: Harcourt, Brace, 1936), pp. 39-41.

In the good society, the consumer is cast in the role of a judge or arbitrator, though not necessarily one possessing absolute or infinite wisdom. As judge, the consumer assigns by his spending pattern the rewards or penalties for specific productive efforts. Entrepreneurs and resource-owners (the consumers in their alternative roles) must adapt themselves to the consumers' verdicts. By serving the purposes of consumers as indicated in the latter's value scale, any producer then acquires purchasing power to fulfill his own purposes as a consumer himself. As producer he is subject. As consumer he is sovereign.[3] At the same time, the consumer in this system is not an innovator. He is voting economically with his fellow consumers to select those entrepreneurs who are to survive in competition; hence to continue to represent him in the productive process. Given opportunity, the entrepreneurs and producer groups would naturally try to bias his preferences (advertising in one form) and to limit his alternatives (monopolistic arrangements). However, in this ideal world they could not do so. The entrepreneurs, in turn, are the intermediaries by which the consumers achieve their ends. Because the consumers' role is judicial rather than initiative, the pattern of production then depends also

---

[2] This bears some relation to Stigler's contention that the classical school emphasized maximization of output because the process itself produced a certain kind of man. George J. Stigler, *Five Lectures on Economic Problems* (New York: Macmillan, 1950), p. 4.

[3] This last point has been made by W. H. Hutt, *Economists and the Public: A Study in Competition and Opinion* (London: Jonathan Cape, 1936), p. 257.

CONSUMER SOVEREIGNTY IN MODERN TIMES

By George H. Hildebrand
University of California at Los Angeles

To avoid fatal misunderstanding, I wish to make clear at the outset that I propose to limit the concept of consumer sovereignty exclusively to the economic power exerted by individual consumers by their spending in the market. This kind of power is clearly distinct from political sovereignty as an alternative method for influencing the economic process. Acceptance of consumer sovereignty therefore means that individual spenders, by their spending, are to reign supreme in controlling both the allocation of resources and the distribution of goods. To be fully effective, this power requires the market mechanism and a perfectly competitive price system.

As a form of social power, individual consumer sovereignty may be viewed in two ways: first, as an imperfectly realized condition of fact wherever a price system exists and demand can influence production; second, as an ethical value to be sought as an ideal and to serve as a standard of reference by which existing facts, policies, and proposals may be judged. I desire here to consider consumer sovereignty initially as a moral value, and to view it deliberately in its pure and extreme form; then to examine some leading situations or proposals where its abridgment or denial is involved; and finally to review the criteria on which such abridgment or denial may rest. My discussion necessarily must be terse and abstract. Perhaps to some, also, the whole problem will appear irrelevant to the times, although I believe this to be a short-sighted view.[1]

I

If adopted as a moral value, consumer sovereignty becomes one of the explicit ends that define the optimum in welfare analysis. To assume consumer sovereignty as an end is to say that the value scale established by the consumers through the market ought to determine both the allocation of resources and the distribution of goods. This in turn seems to me to be a way of saying that individual choices have intrinsic value, that what is therefore required is a type of economic retain any real mastery? Can the common man of our day remain distinctively an individual? Or is he doomed to rise only to lose his identity in the common mass? In the United States the consumer is fast becoming the forgotten man—remembered grudgingly with a few leavings such as the Food Stamp Plan and resigned to take whatever else a paternal state may dole out to him. In Russia he has already become servile, as in mercantilist days—a machine fueled for the benefit of the superstate.

---

[1] One reason why the consumer is limited almost to the economist alone as spokesman, why he rarely figures in the politically possible, is that the consumer is without organization. Organization counts in politics, and this very fact often tends to make the state the natural enemy of the consumer. There is also a second reason: economic gains or losses of consumers are usually diffused, while those of organized groups are concentrated.

broader social perspective, it appears that his future even in economic analysis may depend less on economic theory as such than on the history of our times—economic and ideological, including the ideologies of economists. Indeed, the fate of the consumer and the common man are one; they are the fate of individualism on which hangs that of economics itself.

At close range the consumer's position looks rather gloomy. Mute as always, he has lost the unqualified support of intellectual protagonists and the more solid foundation of laissez faire small-scale capitalism. Meanwhile, business, labor, and agriculture, each of these, can call on the authority of a new economics to shape public policy in its own special interest. Business claims tender treatment, for what would we do without investment incentives? And how can business stabilize itself in the face of antitrust rulings? Labor comes up with a club in one hand and a Keynesian bible in the other demanding higher wages through which, it is argued, labor may serve the common cause. Agriculture claims the same authority, with a little extra tear of sympathy thrown in. The individual is lost in the group or interest bloc. Meanwhile, out of the tussle among these self-styled adherents of the new economics emerges a full-grown monster called "parity," and inflation goes on for another round to knock out the consumer. Antitrust gives way to government cartelization.[7] And the economist's star performer, fiscal policy, discovers that she is rearing a brood of ugly ducklings.

Obviously economists are challenged to come to grips with these forces that are using and misusing their findings. The problem is a tricky one. The increasing rôle of private power groups and government bureaucracy in economic life blurs the lines between economics and the other social sciences. Economists are called upon for a broader understanding of social forces in general. And above all, they are forced to re-examine the extent of their faith in the individual—a philosophical proposition quite distinct from the pragmatic tradition of laissez faire. For economists have long been the bulwark of a philosophy that centers in the individual, and it is to them primarily that society must look for any realistic implementation of that faith in the modern world. Thus, paradoxical as it may seem, the disintegration of scientific economics can be prevented, if at all, only by that nonscientific thing called "value judgments" on the part of economists. Can the consumer the allocation between idleness and employment of resources and between producers' and consumers' goods. Here the consumer still plays a part, but he does not exercise his power by marginal comparisons and direct choices. Instead the results appear as unintended and indirect effects of choices made on quite other grounds. The harmony of interests is regrettably lacking. As a result, the norm of realizing consumer preferences tends to recede before that of realizing full employment. Individuals come to be viewed in a different perspective: as resources seeking employment rather than as consumers seeking satisfactions.

---

[7] Antitrust has of course always reflected producer interests—producer objections to restraints of trade and unfair competition. But with the changing structure of the economy, these interests no longer serve to protect consumers to the same extent as heretofore. Moreover, monopsonistic buying may sometimes neutralize the malallocations and consumer "exploitation" associated with monopolistic selling. But antitrust sometimes attacks monopsonistic buyers who retail for a mass market and who commonly pass on to consumers much of what they save in paying monopolistic suppliers lower prices for the goods subsequently retailed.

Recognized or not, Marx and Malthus have enjoyed a rebirth in modern income and employment theory. Again there is a call to the consumer—a call to serve. For it appears that in some respects he has ruled badly. Thrift has become a mischievous sprite, appearing at the wrong moments and disappearing just when he is needed. The consumer should spend money when he has little and expects less; he should save money when he has plenty and expects more. He does not obey the rules. Since no one expects him to obey them, he can be permitted free choice and some degree of mastery only by indirect public controls over his aggregate saving and spending propensities. Given these controls he may still choose freely as an individual. Such is the solution of those who still believe in him, but there are many who do not or who forget him altogether. And there are some admirers of the sovereign consumer who doom him with perfectionism and defeatism.

Servant, Master, or Forgotten Man; The Consumer's Prospects. What then are the prospects for the consumer? Will he be servant, master, or forgotten man?

In economic analysis much depends upon the progress made in the analysis of choice making in a dynamic context. It is notable that the sovereign consumer of the last generation resided in an artificially static world. The dynamics of Adam Smith and Cantillon had receded in the face of this elaborated static analysis. In the new dynamics of our day consumption in the aggregate has tended to eclipse the individual consumer as choice maker. On the other hand he is still present in the concept of liquidity preference, which has stolen most of the show from time preference. And the last decade has seen some outstanding attempts to extend the theory of choice to dynamic situations —a development that is already expanding consumption concepts and reinstating cardinal utility. Perhaps, then, the consumer has a rosy future in analytical economics despite the forces working against him.

However, if we stand off and view the consumer's prospects from a

---

allocation between producers' and consumers' goods, which is at once a problem in aggregates and in allocation.

manage the accounts or maintain the disinterested objectivity required of him.

Strange partners of the scientific socialists in modern "welfare economics" are some strongly antisocialistic economists and some of mixed leanings who suggest as a limited policy guide the concept of compensating payments. Despite their indisputable competence analytically, these writers are in a weak position so far as the normative issues are concerned. Their weakness reflects two striking contrasts between them and the scientific socialists. Their proposals are not integrated with other policy propositions, and they fail to face up to the unavoidable practical issue of income distribution. These two defects are closely connected. The criterion of compensating payments stems from a free enterprise background but involves public management in practice. By leaving it disconnected with other aspects of public policy, the proponents of this guide are able to maintain the illusion of having excluded the "unscientific" question of income distribution along with cardinal utility. But in fact the attempt to be strictly scientific in one direction—avoiding interpersonal comparisons of utilities—hides a nonscientific base of operation in the *status quo* so far as income distribution is concerned. This position has no more foundation in economics per se than the equalitarianism of the socialists. An inherent reactionary slant is clearly the political implication of scrupulous restraint where income matters are concerned. The only escape from this ethical dilemma is in some supporting argument that involves a prior conditioning of income distribution in accordance with an accepted nonutilitarian criterion. It is significant that from the polar extremes of liberalism as expressed by Professor Knight and scientific socialism as voiced by Lerner and others comes the plea: let us assume the interpersonal comparability of utilities as the best rule of thumb. Indeed, by an ironic twist it is precisely at these extremes that we find the most thoroughgoing democratic individualism combined with the most far-reaching criticisms of the *status quo.*

The third main problem—that of unemployment—involves a two-edged attack on the consumer sovereign: normative and analytical. The whole idea of a nice allocation of resources seems to be thrown out of kilter when many resources are unemployed and many wants unsatisfied. Analytically the attack is, however, a limited one; the threat is more serious in the normative than in the analytical domain.

Modern income and employment theory leaves substantially intact the role of the consumer in the allocation of employed resources among consumers' goods and among producers' goods.[6] The breakdown is in gone. A major participant—yes. An absolute ruler—no. One may defend the consumer by attacking monopoly through public policies such as were recommended by Henry Simons on the one hand or by Oscar Lange on the other; but these are normative defenses. They do not reinstate the consumer to his full sovereignty in the analytical domain.

---

[6] Faulty anticipations take on importance in the dynamic framework, but these are more significant in their aggregative than in their allocative effects—always excepting the

The result of these developments in history and economic theory has been a vast elaboration of the analysis of market adjustments and the role of the consumer in them. These refinements constitute a major advance in the understanding of the economy. It would be futile to protest the demotion of the consumer in theory, whatever one's position with respect to consumers' sovereignty as a norm. While the consumer is considered less powerful, there has been simultaneously a renewed and heightened interest in the effects of choices that affect resource allocation initially via supply. For example, individual expressions of job preferences receive greater attention and may be regarded as an aspect of consumer choices if this concept is interpreted broadly enough.

The second problem—that of inequality—threatens primarily the normative position of the consumer. That the problem is essentially political is evident. It is philosophical and ethical, also, for on what grounds can one justify any given distribution of consumer "dollar votes"? Can there then be any effective defense of the consumers' sovereignty concept? Evidently any defense must hinge on some prior proposition with regard to the distribution of dollar votes. By the strongest exponents of liberalism, the answer is sought in policies aimed at the equalizing of opportunity to acquire income within a free enterprise economy. Perhaps this approach is due for a revival. However, most economists who have recently directed their attention to this issue have put their emphasis elsewhere. They fall in two main groups: the "scientific socialists" and the proponents (usually somewhat lukewarm) of the concept of "compensating payments" as a policy guide.

The scientific socialists meet the ethical issue squarely; they support the sovereign consumer on the prior condition that the inequalities in the pseudo democracy of a free enterprise system be purged. Public management of a socialist state is then to be directed to the end of allocating resources in accordance with consumer preferences. The monopoly and employment problems are swept away at the same time; so that no conflict of goals remains. Given their goals, the chief trouble with the solution offered by the scientific socialists is not so much its economics per se as its utopian character. The problem of labor incentives is a formidable one. Moreover, it is doubtful that even a scientific socialist—should he by some miracle attain the seat of power—could carried back through the economy by imputation. In the latter application the worker took on a consumer aspect, as did the owner of land or other property capable of use in either production or direct consumption. Here was the beginning of the merger of the consumer with the individual as choice maker on all the boundaries of economics, a development that is being amplified in modern theories of the dynamics of choice. Finally, from Marshall in England and Wicksell in Sweden came the chief contributions to a marginal theory of interest that served to equate saving with investment and thus realize consumer preferences in the allocation of resources over time.

With the proliferation of opportunity-cost analysis, the elevation of the consumer to sovereign status in static theory was virtually complete. This abstraction reached its peak in a revamped theory of general competitive equilibrium. And with his *de facto* rule in theory came also a rule *de jure*. The satisfaction of consumer preferences was honored as "the economic end" even as the subjective emphasis that had brought the consumer to the throne was evaded by indifference analysis. It is perhaps somewhat ironical that the purest of pure theory—the general equilibrium model—should be simultaneously denuded of its subjective content, yet useful primarily if not solely in this normative context.

The Monarch at Bay; Monopoly, Inequality, and Unemployment. Perhaps at this point the consumer surpassed himself. At any rate he will never again reign so nearly absolute a monarch in theoretical economics and his fate in the normative domain is problematical. There were always serious weaknesses in his defenses—weaknesses recognized in part all along. But what were once cracks are becoming chasms with the progress of history as well as that of economic analysis. Three essential problems are involved: monopoly, inequality, and unemployment.[5]

The first problem—that of monopoly—threatens the consumer in the analytical domain. Even before the consumer was fully installed on his throne, the days of small-scale capitalism had passed. So long as monopoly was considered exceptional and most immobility and indivisibility could be passed over as unimportant or "merely frictional," they constituted no serious threat. But history has forced a recognition of the importance of these factors. No natural order now supports the sovereign consumer, nor is there a contemporary equivalent in the accident of favorable historical conditions. With the loss of these props, the consumer's lofty position in analytical economics is other between depreciation allowances and orders for replacement of capital goods bring swings in the general level of economic activity; the circular flow is no longer smooth but suffers interruptions. Despite its linkage with the theory of surplus value, Marxian crisis theory embodied a remarkably mature conception of the function of consumption as a primer of economic activity. Because of the emphasis on the low income of labor, it is perhaps more a plea to "give the consumer a chance" than the "call for the consumer" issued by Malthus.

---

[5] The Pigovian distinction between social and private costs and social and private revenues is important, also. However, despite its significance, this analysis failed to shake the foundations of traditional doctrine. In an expanded form it is perhaps due to receive increased attention.

The normative foci of these early writers was indeed quite different from that predominating among modern national income and cycle theorists. Among most of the early Continental writers and in Marx the normative emphasis was on the redistribution of income or economic power. Malthus' analysis was linked with a conservative philosophy that was at once moralistic, profoundly individualistic, and pragmatic; his ultimate concern was with the improvement of mankind in accordance with divine teleology. Only recently has the goal of full employment tended to eclipse other norms associated with analysis of the aggregative role of consumption.

The Consumer Enthroned; Subjective Utility, Opportunity Cost, and General Equilibrium. It was not until the subjective utility approach took over economics that a mature conception of the consumer role in resource allocation appeared. Although this approach had been "in the air" for some time, it exploded in the famous year 1870-71, to begin a new era in economics. Advance was groping at first. Ignoring the important developments on the Continent, this discussion will be confined to England.

In England the problem of co-ordinating the new utility theories with the older cost theories came to take the center of the stage. At first this was done primarily through the idea of "real costs" or disutilities—Benthamite "pains." Jevons' supply curve of labor was based on the irksomeness of work matched against the marginal utility of income. A similar train of thought appeared even in Edgeworth and Marshall. The most persistent of these disutility or real cost explanations was probably the idea of interest as a reward for waiting. Quite aside from its hedonistic coloration, this concern with real costs delayed a full-fledged consumer orientation. It was only when real costs could be converted into a positive preference form that opportunity cost could take over, and with it the consumer.

Wicksteed was the first of the British economists explicitly to join the utility and cost approaches through opportunity cost. The concept was applied in connection with both the allocation of resources among different uses and the margin of choice between leisure or idleness of resources and income. In the former application consumer rule was were not so closely integrated as those of Ricardo or the physiocrats—a characteristic that was both a strength and a weakness. Malthus' inductive approach, with his dislike of the abstract assumptions of deductive analysis, may be in part responsible, also, for his failure to exploit the "labor commanded" approach to value by a further development of resource allocation analysis.

The Unfortunate Consumer; David Ricardo and John Stuart Mill; The Iron Law and the Wages Fund. Ricardo and John Stuart Mill marked a retreat rather than an advance in conceptions of the role of consumption, for in selecting the "labor embodied" version of Smith's theory of value, Ricardo set a pattern of cost rather than demand analysis that conditioned British classical economics for some time to come; it delayed the acceptance in Britain of interpretations of economic adjustment in which consumption was brought to the fore. In fact, the Ricardian emphasis on the iron law of wages and the rigid wages-fund doctrine of Mill made the whole question of any active role of the consumer in the economy largely irrelevant. The small degree of elasticity in the subsistence minimum admitted by Ricardo and the emphasis on prudential population checks in their relation to living standards in Mill modified the fatalism of their analyses; but such modifications did not alter the fact that consumers as such played little more than a passive role in the dismal science of these economists. Their aims were diametrically opposed to those of the mercantilists, but the role of the "unfortunate" consumer in classical economics was not markedly different from that of the "servile" consumer in mercantilism.

Give the Consumer a Chance; Marx and the Continental Underconsumption Theorists. The Continental "underconsumption" theorists from Sismondi on received little attention from orthodox British and American economists. Like Malthus' theory of glut, their ideas were uncongenial to the prevailing trend of what came to be equilibrium analysis. Moreover, their political views were unacceptable. Only recently have these two streams of thought begun to merge, and such is the resistance of the human mind that it took an orthodox equilibrium approach by Keynes to turn the trick. Malthus' theory was more sophisticated than the others with the exception of Marx.

Marx's ingenious adaptation of Quesnay's *Tableau* has been much discussed in recent years. Whatever may be said of its defects, the brilliance of the accomplishment at the time can hardly be questioned. Here we have an almost full-grown appreciation of circular flow joined with a distinction between producers' and consumers' goods and an awareness of the significance of capital goods production in the maintenance of employment. Briefly, discrepancies one way or the

Malthus made four contributions toward a greater understanding of the role of the consumer and consumption in economic life, though all four were somewhat abortive. First, Malthus selected the labor-commanded aspect of Smith's value theory rather than the labor-embodied approach. This prevented the development in Malthus of an iron law of wages or the wages-fund doctrine that characterized his classical successors; but Malthus made no positive use of this approach in developing an over-all resource allocation analysis. Indeed, in this respect he was far behind Cantillon and even the physiocrats, despite the fact that the latter had been hampered by their concept of value. Second, Malthus initiated the "Ricardian" theory of rent, which establishes the fundamental marginal productivity concept; but neither Malthus nor his immediate successors extended this theory in a generalized form. Third, in connection with his study of population, Malthus went a step beyond Cantillon in the distinction between levels and standards of living; but here Malthus was limited by the historical setting. Despite his concern for the common man, Malthus reflected the pre-Smithian focus on the consumption of the wealthy versus that of the masses of the people, and he was unable to foresee the rapid rate of increase of production and the development of birth control techniques that lay ahead.

It was in his theory of general glut that Malthus gave to consumption an explicit and active role in economic life. This theory he opposed to Ricardo on the one hand and to J. B. Say on the other. Essentially he argued that saving pushed to excess would destroy the motive to production—that there was no certainty that savings would find an outlet in investment. Indeed, "if every person were satisfied with the simplest food, the poorest clothing, and the meanest houses, . . . no other sort of food, clothing and housing would be in existence." Thus the theory of general glut involved a conscious consideration of the active role of consumption in economic life. It issues a call to the consumer. Higher wages were not a way out, since they raised cost as much as demand. Poor relief was not even considered, having been already thoroughly condemned as conducive to an excessive growth of population. Two kinds of demand filled the bill: the unproductive demand of wealthy people and public works. The modern coloration in this view of the consumer's role in the economy is evident, even though Malthus probably remained largely unaware of the circular flow process inherent in his analysis. Although Malthus discussed at some length what amount to the "propensity to save" and the "propensity to consume," he did not weave them into an integrated circular flow theory. This lack of awareness is associated with his inductive methodology and his disregard of the physiocrats. His thoughts on economics consumption to workers engaged in making material goods. Investment involved such a transfer to productive consumption. Individuals were sometimes profligate instead of thrifty, but on balance Smith believed that thrift outweighed extravagance among private citizens. Since governments tended to extravagance and government services were usually unproductive, this became one of the pegs on which Smith hung his support of laissez faire.

Taking a cross-sectional view of Smith's stream of progress, the harmony at any given time between consumers' preferences as expressed in the market and the allocation of resources in response to income incentives is evident. However, Smith did not endorse without reservation the realization of consumer preferences as a goal. His reservations are evident in his moral philosophy. Weighing various factors in the balance, he came out with an endorsement of freedom, rather than an allegiance to consumers' sovereignty as such. He put more stress on distribution than on consumption.

The Psychic Infant; Jean Baptiste Say and Jeremy Bentham. Jean Baptiste Say was probably the first economist to become an unqualified exponent of the normative position that the satisfaction of consumer preferences, whatever those preferences might be, was an end in and of itself. He came to this position in part through his interpretation of value as based on utility and scarcity. Though a devoted pupil of Adam Smith, he discarded the materialistic conception of wealth, explicitly including nonmaterial services in production; for these, like goods, yielded utility and hence had value.

Jeremy Bentham shared this utility approach to value. Moreover, he anticipated implicitly the concept of marginal utility though he applied it only to income or property as a whole, not to particular goods or services. Bentham's utility functions were nonreversible: a loss involved a pain greater than the pleasure resulting from an equal gain. The difference was due primarily to the pain of insecurity. In view of this fact Bentham's calculus required important simplifications before it could be applied to the static models of a later date.

Neither Say nor Bentham seems to have had much influence on his respective contemporaries so far as the utility theory of value was concerned. In this respect they anticipated the orientations that characterized economics in the late nineteenth century—not classical economics. It was "Say's law" of the equality of aggregate demand and aggregate supply that ensured his place among his British contemporaries and immediate successors. And when British economists came finally to accept a utility approach to value, it was the pain side of Bentham's calculus that enabled them to smooth the transition from a cost to a demand approach.

Call for the Consumer; Malthus and the Theory of General Glut.

The idea of a beneficent "natural order" was developed as a defense and justification of physiocratic policy; it was the philosophical counterpart of pragmatic laissez faire, going beyond previous liberal ideas of "social contract" to the inherent rights of man. Laissez faire as a practical political program and the natural order as its philosophical twin became substantially the creed of Adam Smith and his followers. This creed went a step beyond Hume in setting the stage for a focus on the realization of consumer preferences as a desirable goal in itself—a repercussion felt long after the metaphysics of the natural order had been discarded.

The Consumer Fraternal; Adam Smith—Freedom and Harmony in Economic Progress. In *The Wealth of Nations* for the first time the emphasis is clearly and unqualifiedly on the goal of a continuously rising level of living for the masses of the population. As enamoured of thrift as his British predecessors, and as intolerant of profligacy, Adam Smith had nevertheless a very different attitude toward what was then called "luxuries of the poor." In his words: "No society can surely be flourishing and happy, of which the far greater part of the members are poor and miserable."[4]

There is little pessimism in Adam Smith. Neither an iron law of wages nor a dilemma of unemployment trouble his utopian free society. This is true despite the fact that Adam Smith, like the mercantilists and physiocrats before him, foreshadowed the iron law in certain elements of his thought. Steady progress with its corollary of high wages is conceived as possible almost indefinitely, provided the state will keep out of the way. And with this advance may be associated, also, the harmony of interests of all classes of the people. (Adam Smith's philosophy was essentially pragmatic, despite traces of divine teleology. He was more aware of the utopian aspects of his theories than were many of his followers, though he did not realize the historical limitations of the economic reality from which his utopia was constructed.) Central in this dynamic framework were thrift and the profit motive, for upon saving to invest in the search for profit depended the accumulation of wealth. That savings would be invested was taken for granted. Thus the rôle of the consumer-saver in the allocation of resources between present and future consumption was emphasized.

Closely associated with his emphasis on material progress is Smith's famous distinction between "productive" and "unproductive" consumption—a distinction similar to that of the physiocrats although Smith dropped their dichotomy between agricultural and other employments. An important desideratum was the behavior of the wealthy, who might spend unproductively on the services of domestic servants and professional men or who might spend productively by transferring national revenue. As a result, expenditures would be increased, which, he argues, "favor the population because the augmentation of expenditure brings gains to a large number of men. The growth of population extends consumption. Consumption sustains the price of commodities which are multiplied by the cultivation in proportion to the needs of men, that is to say in proportion as the population grows." (This suggests a direct proportionality between population and aggregate consumption; hence an approximation to a subsistence theory of wages. But the concept was elastic. Though it might be interpreted as a foreshadowing of the "iron law" of wages, there is no iron law in physiocratic doctrine.)

---

[4] *The Wealth of Nations* (Cannan ed.), Vol. I, p. 80.

The rudimentary multiplier analysis contributed by the physiocrats derives directly from their emphasis on the special role of agricultural investments (annual advances) in economic progress.[3] First, the proprietary class was saddled with the responsibility of diminishing tithes and taxes and limiting its own consumption that the cultivators might have more leeway with which to make the annual advances necessary for the progress of agriculture. The greater these annual advances, the greater by a multiple the subsequent surplus yielded by the land and hence the greater by a multiple would be the revenues of both cultivators and the proprietors themselves. (Thus the self-interest of the landed proprietors was in harmony with the general interest. They needed only to be educated to their own interests.) With greater revenues, productive consumption would be increased, which would in turn lead to further increases in production, revenues, etc. Conversely, extravagant expenditures by the proprietors with burdensome levies on the cultivators would start a cumulative decline such as France had experienced over recent generations. The employment issue as such was not raised, but here, nevertheless, was an analysis of circular flow that incorporated both consumption and investment expenditures in the determination of the general level of production.

The physiocrats walked the fence so far as the masses of the population were concerned. Their immediate goal was the prosperity of agriculture, which was viewed as the road to national prosperity; and it was capitalistic cultivators on whom they focused attention. But, in contrast to the mercantilists, the physiocrats believed that an improvement in the economic condition of the common man was an essential ingredient of national prosperity. If national wealth was not yet defined as the wealth of the people as a whole, neither was the wealth of the state a thing apart from that of the population.

---

[3] An interesting comparison of Quesnay's analysis and the Keynesian multiplier is included in a remarkable master's thesis, *The Concept of Consumption Among the Physiocrats and the Classical Economists,* by Donald W. Regier (Iowa State College, 1949).

consumption conditioned the uses to which resources would be put. Also, in the *Tableau Economique* they adopted from him the idea of a circular flow. But they went beyond Cantillon by introducing the idea of cumulative effects. They gave to all of their analysis an agricultural bias lacking in the earlier writer and they adopted what was essentially a "material embodied" definition of value. In view of Cantillon's emphasis on the role of the landed proprietor, it is not surprising that his work was favorably received among leading French thinkers of 1755. However, to Cantillon craftsmen were as productive as cultivators—"intrinsically" perhaps even more so, because of the training, etc., for their work. Intrinsic value was all the land and labor embodied in a thing, including the labor of fabrication, transport, etc.

The resource allocation concept in physiocratic literature lost ground because of the materialistic definition of value and the agricultural bias—the two being closely associated. All nonagricultural labor was "sterile" and all expenditures on fabricated products and on raw materials used in fabrication were "unproductive consumption"; for value resided in matter and a decrease of matter was generally involved in fabrication. "Productive consumption" included investments in the form of the annual advances to agriculture for productive use and the consumption of agricultural products, for both of these gave rise to or supported "productive" (i.e., agricultural) labor. Thus the *Tableau* was set up in such a way as to emphasize movements to, from, and through agriculture; the generalized analysis of resource allocation inherited from Cantillon shrank into a focus merely on the extent to which resources were moved into and utilized by agriculture. There was also a blurring of the distinction between investment and consumption outside of agriculture; and the lag between such investment and sale of the product was forgotten. Cantillon had discussed lags in all spheres of enterprise, primarily in connection with his discussions of credit, the velocity of circulation of money, and the amount of money needed to keep the wheels of the economy oiled.

Yet, in broadly categorizing consumption expenditures as productive or unproductive and labor as productive or sterile, the physiocrats pushed economics ahead along another line—toward an understanding of the aggregative role of consumption in the economy. This point is apparent, for example, in Quesnay's arguments for free export of grains. Here Quesnay is in sharp contrast to Cantillon. His argument in favor of the free exportation of foods and other agricultural products is of course consistent with the physiocratic laissez faire position, but it probably stems primarily from the emphasis on the importance of encouraging development of a capitalistic agriculture. Export would raise agricultural revenues, which formed at that time the bulk of value of their services, another man is induced to become a tailor; as prices fall short of that point, one of the tailors drops out. The analysis is carried back through the economy by imputation; an increase in demand for horses will raise the price of grass as compared with wheat, bringing about a corresponding shift in land use. It is through an extension of this imputation analysis combined with a somewhat elastic subsistence theory of population that Cantillon approaches the question of the level of employment and the size of the population as a whole.

Cantillon did not share the mercantilist condemnation of the "luxuries" of "the poor," but he followed the mercantilist line in criticizing consumption choices that involve imports of luxuries (and exports of food). Quite incidentally, Cantillon justified consumption of domestically produced luxuries when such consumption was needed to maintain full employment of a large population able to produce a large surplus above subsistence. This argument is found in some of the mercantilist writings in justification of luxuries of the rich, but Cantillon generalized the idea for the population as a whole. Some comprehension of the aggregative role of consumption in maintaining full employment seems to be implied, but Cantillon did not develop the idea. Despite the allocative focus of his analysis, there is no suggestion of a normative interest in consumer preferences as such.

Briefly, then, consumer expenditures are the drive shaft of the entire economy and steer its course. The emphasis is analytical, not political or philosophical; but implicit are the goals of high productivity, a large population, and full employment. Unemployment and depopulation result primarily from consumption patterns that distort resource allocation.

The Consumer and the Circle; Physiocracy; Effects of Consumption on Agricultural Productivity. During the seventeenth and eighteenth centuries France had sunk deeper and deeper in the economic doldrums. She was suffering from oppressive feudalistic survivals, elaborate restrictions on enterprise, unequal, arbitrary, and heavy taxation from which the nobility were exempt, and progressive exploitation of the people by a profligate and irresponsible court. Agriculture was in a sorry state, poverty dire, and a flight of men and wealth from the fields to the towns intensified the contrast between the brittle luxury of an ostentatious minority and the misery of the common lot. Population had been declining rapidly. A revival in agriculture, which was still the foundation of the French economy, was clearly of the greatest importance. It is against this background that the physiocrats must be understood. Analytically they drew upon Cantillon, philosophically upon Hume and Locke, but in each case they provided their own special bias and their own new insights.

The physiocrats took from Cantillon the idea that the pattern of army of labor could be maintained, ready for use by the state in case of need. Thus Hume argued in favor of innocent luxury, which was mass luxury, on the same grounds on which the mercantilists condemned it. But in addition there was a utilitarian element in his distinction between "innocent" and "vicious" luxury. The luxury consumption of a small wealthy minority was vicious, not only because it could not be justified on the grounds of inducing greater industriousness, but also because it afforded satisfaction to such a small proportion of the population. The way was now opening for development of a normative concept of the sovereign consumer, though that concept was not to come to full fruition for over a century.

King for a Day; Richard Cantillon and Consumer Rule over Resource Use. Analytically, the idea of the consumer as sovereign had already made its appearance, however. Richard Cantillon's *Essay on the Nature of Commerce* was first published in French, in 1755, though the author was an Irish-born British banker who had died in 1734. Unlike his contemporaries, Cantillon posed basic analytical questions concerning the structure and functioning of the domestic economy. If he did not go so far as Hume toward a liberal philosophy, he nevertheless went much further in developing a systematic economics. More than any other single writer, Cantillon was the source from which the physiocrats drew their initial inspiration. He was honored by Adam Smith but ignored by subsequent British economists.

Throughout Part I of the *Essay* two interlocking themes recur again and again. First, consumer choices determine resource allocation. Second, everything goes back ultimately to the expenditures of the landed proprietors, who determine the directions production will take both in fabricating and in agricultural employments. Their crucial position rests on the fact that they receive the surplus of production and they set the pattern of consumption. Consumer choices of other members of the society play a part, but these are imitative of the landed proprietors.

The role of consumer choices in resource allocation is sharply outlined and carefully elaborated. Although the intrinsic value of a thing depends on the land and labor embodied in it, market value depends on the relation between demand and supply. Productive resources move in response to demands and thus market price is brought more or less in line with intrinsic value. (Cantillon was too much of a realist to overstate the extent of the concordance between market and intrinsic value. He emphasized the risks and lags that prevent the tendency from working itself out in full—especially where demand is erratic or supply subject to uncontrollable variations such as result from the weather in agriculture.) These adjustments are viewed in implicitly marginal terms. As prices obtained by tailors rise above the intrinsic of the workers in habits of industriousness and thrift. Low real wages, to be attained primarily by increasing prices, were similarly a disciplinary means of enforcing fuller employment among the masses. There was, it is true, an occasional insight concerning the role of consumption in creating employment; consumption of home-produced luxuries by the wealthy was justified on these grounds; and some writers suggested in a vague way that rising prices (by stimulating trade) contributed to higher over-all levels of employment. But such reasoning was swamped by its opposite. The lower the level of real wages the higher the level of employment forced upon a naturally slothful population. Jacob Vanderlint was an outstanding exception, in fundamental conflict with most of the writers of his day. He wrote that "lowering wages would be injurious since the laboring class being the bulk of mankind would in this case affect consumption of things in general so mightily that there would be a want of trade and business amongst the other part of the people."[3]

The mercantilists were concerned with resource allocation almost solely in relation to the trade balance. Their emphasis on manufacture and trade was linked with concern over the full employment of the masses rather than the diversion of labor from one sphere of production to another. In an era in which mass "luxuries" of white bread and tea were bitterly condemned—an era in which "the lower order" that comprised the bulk of the population was an undifferentiated mass to be manipulated for the state—there was little to direct attention to the broader analytical questions of the consumer's place in resource allocation. And the goal of consumers' sovereignty was totally uncongenial to men who believed that "the poor" should behave in accord with their "rank and station" in life.

In summary then: consumption to the mercantilists was simply the means of maintaining the labor supply. Even to designate this as a conception of the "servile consumer" is perhaps to go too far. Rather, the idea of the consumer as such was still unformulated. Instead there was a resource called labor that, unfortunately, had to be fueled.

"Innocent Luxury." Gradually through the seventeenth and eighteenth centuries there developed alongside mercantilism a line of thought that lay the foundations of an economics focusing on the welfare of individuals instead of the state per se. These contributions stemmed more from philosophy than from economic analysis as such. The change is foreshadowed by Hume's ideas concerning luxury.

Hume argued that "innocent luxury" was the most practicable means by which to induce men to work industriously. Also, by the employment of the population in the production of innocent luxuries a reserve mercantilist thought: the attitude that each class should behave in a manner "suitable" to its "rank and station," and the emphasis on the wealth of the state as a goal. National wealth consisted in whatever made the state strong, and in that alone. A strong state was one that had the upper hand in the economic rivalry among nations; hence the emphasis on a favorable balance of trade, making other states dependent and tributary. The shift from emphasis on specie inflow to the "favorable balance of labor" involved little change in the basic pattern of thought except with regard to the innate value of specie.

---

[3] *Money Answers All Things* (1734), pp. 120 ff.

To the mercantilists, the masses of the population were primarily productive resources; consumption among the masses was viewed as the means of maintaining a labor supply to produce for the benefit of the state. Poverty of the masses was entirely compatible with national wealth. Indeed, low wages meant cheap labor; hence a strong competitive position in international trade. Luxury consumption had long been decried as displeasing to God. From John Hales (1549) on it was argued, also, that luxury made "the poor" effeminate, lazy, and inefficient workers. As pauperization increased, these arguments became more strenuous. One of the most persistent arguments for a large population reflected this attitude: more people make higher prices of necessities, which forces people to be more industrious. In the words of Daniel Defoe, "the crimes of our people . . . are: 1. luxury; 2. sloth; 3. pride."[1]

The servile position of the mass consumer in mercantilist thought is sharply defined in the attitudes toward labor. Labor was *the* productive resource enabling a state to maintain a favorable balance of trade. As the balance of trade doctrine was elaborated, this role of labor was increasingly emphasized, along with the emphasis on manufacture and trade. Any value added by manufacture was a net gain to the nation, regardless of cost, for it meant either more for export or the home production of goods that would otherwise be imported. The larger the labor force the greater the potential wealth of the nation. More people meant more of the "active" productive factor to bring into fuller use the "passive" factor, land.

But a large population was of little use unless it was fully employed; so full employment became a major secondary goal of mercantilist policy, not for the sake of the workers, but for the benefit of the national state. From this point of view a long working week was quite as important as the elimination of involuntary idleness. The workhouse was viewed at first primarily as a means of increasing the wealth of the state by employing the involuntarily idle to create an export surplus. It became increasingly an institution for the discipline

---

[1] *Giving Alms No Charity* (1704), Vol. II, p. 466.

THE ROLE AND INTERESTS OF THE CONSUMER

THE CONSUMER IN THE HISTORY OF ECONOMIC DOCTRINE

By Mary Jean Bowman
Lexington, Kentucky

"As in the days of the mercantilists, the consumer is rapidly becoming a puppet of bureaucratic management. Economists are becoming fiscal policy experts who delight in pulling the strings to make consumers dance to their tune." Such was the offhand retort of my sociologist husband when I first mentioned the topic of this paper. How much truth is there in this astringent comment?

This paper sketches the historical role of the consumer in economic thought as a means of gaining perspective on our contemporary treatment. From the start it is clear that "the consumer" is a concept or rather a group of concepts which arise in both analytical and normative contexts.

Four analytical perspectives with regard to the role of the consumer and of consumption in the economy may be discerned: (1) Consumption is regarded primarily in its effects on the labor supply. Normatively this approach ranges all the way from exploitative nationalism to utilitarian concern with the level of living of the masses. (2) Consumption with its counterpart in thrift is related to the accumulation of wealth. This type of analysis appears in a relatively clear form only after individualism has become ascendant. Normatively it is therefore found primarily in association with the goal of economic progress for the population as a whole. (3) The consumer is viewed as the originative and active agent in determining the allocation of resources. To the extent that this analysis includes allocation between present and future consumption it overlaps the second point. Since the late nineteenth century the normative stress has been mainly on realizing consumer preferences, but a resource allocation analysis has been applied in other normative contexts, also. (4) Consumption is conceived primarily as a propellant that helps keep the economy rolling and productive resources employed.

The Servile Consumer; Mercantilist Nationalism and Consumption for Production. Mercantilism—little more than a prelude to economics —was largely motivated by and linked to policy discussions. Theoretical conceptions were rarely explicit. Two basic factors conditioned

THE purpose of the American Economic Association, according to its charter, is the encouragement of economic research, the issue of publications on economic subjects, and the encouragement of perfect freedom of economic discussion. The Association as such takes no partisan attitude, nor does it commit its members to any position on practical economic questions. It is the organ of no party, sect, or institution. Persons of all shades of economic opinion are found among its members, and widely different issues are given a hearing in its annual meetings and through its publications. The Association, therefore, assumes no responsibility for the opinions expressed by those who participate in its meetings.

JAMES WASHINGTON BELL
Secretary

Chairman: J. ROBERT BEATTIE, Bank of Canada
Paper: JOHN H. WILLIAMS,[8] Harvard University

2:30 P.M. 1. *Reappraisal of the Easy Money Policy*[8] (Joint session with the American Finance Association)
Chairman: FRITZ MACHLUP, Johns Hopkins University
Papers: HENRY MURPHY, International Monetary Fund; LESTER V. CHANDLER, Princeton University
Discussion: JOHN K. LANGUM, Federal Reserve Bank of Chicago; HOWARD R. BOWEN, University of Illinois

2. *Point Four: Development of Backward Areas*
Chairman: IMRIE DE VEGH, Pell, de Vegh and Company
Papers: PAUL N. ROSENSTEIN-RODAN,[1] International Bank; JAMES BASTER, United Nations; WILLARD L. THORP, Department of State

3. *Farm Problems: I. Functioning of Capital and Labor Markets*[7] (Joint session with the American Farm Economic Association)
Chairman: F. F. HILL, Cornell University
Papers: WALTER W. WILCOX, Library of Congress; WILLIAM E. HENDRIX, Georgia Agricultural Experiment Station; D. GALE JOHNSON, University of Chicago
Discussion: CECIL B. HAVER, North Dakota State College; LOWELL HARDIN, Purdue University

4:30 P.M. *Annual Business Meeting*

8:00 P.M. 1. *Government Action or Private Enterprise in River Valley Development*
Chairman: PHILIP NEFF, University of California at Los Angeles
Papers: W. W. HORNER, Horner & Shifrin; PAUL J. RAVER, Bonneville Power Administration; BENJAMIN U. RATCHFORD, Duke University
Discussion: JOSEPH S. RANSMEIER, Dartmouth College; DEAN RUSSELL, Foundation for Economic Education

2. *Differential Economic Progress: Some Cases, Comparisons, and Contrasts*
Chairman: CARTER GOODRICH, Columbia University
Papers: DANIEL H. BUCHANAN, University of North Carolina; SANFORD A. MOSK, University of California; JOHN V. VAN SICKLE, Wabash College
Discussion: MARTIN BRONFENBRENNER, University of Wisconsin; JOSEPH L. FISHER, Council of Economic Advisers; OLIVE B. THOMAS,[1] University of Alabama

Saturday, December 30, 1950

9:30 A.M. 1. *Modern Industrialism and Human Values*
Chairman: EDWIN E. WITTE, University of Wisconsin
Papers: MERRILL K. BENNETT,[8] Stanford University; HAROLD A. INNIS, University of Toronto; KENNETH E. BOULDING, University of Michigan
Discussion: CARL F. TAEUSCH, St. Louis University; WALTER A. WEISSKOPF, Roosevelt College; BROADUS MITCHELL, Rutgers University

2. *Economics in General Education* (Round table discussion of Report of Committee on the Teaching of Undergraduate Economics)
Chairman: HARRY D. GIDEONSE, Brooklyn College
Papers: LAURENCE E. LEAMER, University of Chicago; ALBERT LAUTERBACH, Sarah Lawrence College; HORACE TAYLOR, Columba University; BEN W. LEWIS, Oberlin College

3. *Farm Problems: II. Agricultural Price Support* (Joint session with the American Farm Economic Association)
Chairman: THEODORE W. SCHULTZ, University of Chicago
Paper: GEORGE MEHREN, University of California
Discussion: JOHN D. BLACK, Harvard University; O. H. BROWNLEE,[1] University of Minnesota; DON S. ANDERSON,[1] Production and Marketing Administration; W. W. COCHRANE, Pennsylvania State College

12:00 M. *Luncheon Meeting of the Executive Committee*

---

[7] To be published in the *Journal of Farm Economics.*
[8] To be published in the *American Economic Review.*

Papers: ARTHUR SMITHIES, Harvard University; LLOYD W. MINTS, University of Chicago
Discussion: EDWARD C. SIMMONS, Duke University; EVERETT E. HAGEN, University of Illinois; WALTER A. MORTON, University of Wisconsin

2:00 P.M. 1. *Taxation and Business Incentive* (Joint session with the American Finance Association)[2]
Chairman: SIMEON E. LELAND, Northwestern University
Papers: HARRY G. GUTHMANN, Northwestern University; CARL S. SHOUP, Columbia University; GEORGE W. MITCHELL, Illinois Department of Finance
Discussion: HAROLD M. SOMERS, University of Buffalo; RICHARD B. GOODE, University of Chicago; ROBERT S. FORD, University of Michigan

2:30 P.M. 2. *The Housing Problem: II. Long-run Effects of Government Housing Programs*
Chairman: ARTHUR M. WEIMER, Indiana University
Papers: LAWRENCE N. BLOOMBERG, Public Housing Administration; SHERMAN J. MAISEL, University of California
Discussion: ARTHUR R. UPGREN, University of Minnesota; EDWARD E. EDWARDS, Indiana University; RAYMOND J. SAULNIER, Columbia University

3. *Factors in Modern Industrial Development* (Joint session with the Economic History Association)
Chairman: ARTHUR H. COLE, Harvard University
Papers: PRESTON E. JAMES, Syracuse University; YALE BROZEN, Northwestern University; S. D. CLARK, University of Toronto; HENRY G. AUBREY, Institute of World Affairs, New School for Social Research
Discussion: WARREN C. SCOVILLE, University of California at Los Angeles; HAROLD F. WILLIAMSON, Northwestern University; ARTHUR H. COLE,[1] Harvard University

8:00 P.M. *Presidential Address*
Chairman: ALBERT B. WOLFE, Ohio State University
Paper: FRANK H. KNIGHT,[3] University of Chicago

Friday, December 29, 1950

9:30 A.M. 1. *Economic Mobilization Short of War*[4]
Chairman: DEXTER M. KEEZER, McGraw-Hill Publishing Company
Papers: ALBERT G. HART, Columbia University; JOHN K. GALBRAITH, Harvard University
Discussion: DONALD H. WALLACE, Princeton University; CARROLL R. DAUGHERTY, Northwestern University; LESTER V. CHANDLER, Princeton University; GARDNER ACKLEY, University of Michigan

2. *Economics of Medical Care: II. Alternative Solutions* (Joint session with the American Association of University Teachers of Insurance)
Chairman: C. RUFUS ROREM, Hospital Council of Philadelphia
Papers: SEYMOUR E. HARRIS, Harvard University; CLARENCE A. KULP, University of Pennsylvania; JEROME ROTHENBERG, Amherst College
Discussion: FRANK G. DICKINSON, American Medical Association; RALPH H. BLODGETT, University of Florida; CARL T. ARLT, Oberlin College

3. *Public Utilities and National Policy*
Chairman: EMERY TROXEL, Wayne University
Papers: HORACE M. GRAY, University of Illinois; JAMES C. BONBRIGHT,[5] Columbia University; C. WOODY THOMPSON,[6] University of Iowa
Discussion: DAVID G. TYNDALL, Carnegie Institute of Technology; ERWIN E. NEMMERS, Marquette University; MARTIN G. GLAESER,[5] University of Wisconsin

12:00 M. *Luncheon Meeting: Monetary Control and the Public Debt* (Joint session with the American Finance Association)

---

[2] To be published in the June, 1951, issue of the *Journal of Finance*.

[3] Published in the March, 1951, issue of the *American Economic Review*.

[4] All but the paper by John K. Galbraith were published in the March, 1951, issue of the *American Economic Review*. His paper published in the *Review of Economics and Statistics*.

[5] Published in the February, 1951, issue of *Land Economics*.

[6] To be published by the Bureau of Business Research, University of Iowa.

Chairman: Leverett S. Lyon, Chicago Association of Commerce and Industry

Papers: Forest D. Siefkin, International Harvester Company; Ralph E. Flanders, U. S. Senate

2:00 P.M. 1. *Economic Theory, Statistics, and Economic Practice* (Joint session with the American Statistical Association and the Econometric Society)

Chairman: Leverett S. Lyon, Chicago Association of Commerce and Industry

Papers: Henry S. Dennison, Dennison Manufacturing Company; Rutledge Vining, University of Virginia; Francis M. Boddy, University of Minnesota

Discussion: Clifford Hildreth, University of Chicago; George J. Stigler, Columbia University

2. *Capital and Interest*

Chairman: William A. Paton, University of Michigan

Papers: J. Fred Weston, University of California at Los Angeles; Frank E. Norton, Jr., University of California at Los Angeles; Maurice Moonitz, University of California; Arthur H. Leigh, Reed College

Discussion: Jacob A. Stockfisch, Federal Reserve Bank of Kansas City; James S. Earley, University of Wisconsin

3. *The Housing Problem: I. The Current Situation* (Joint session with the American Statistical Association)

Chairman: Ernest M. Fisher, Columbia University

Papers: Leo Grebler, Columbia University; D. Gale Johnson, University of Chicago

Discussion: Glenn H. Beyer,[1] Cornell University; Ramsay Wood,[1] Board of Governors of the Federal Reserve System; William D. Grampp, University of Illinois

8:00 P.M. 1. *Current Problems in International Trade*

Chairman: Howard S. Ellis, University of California

Papers: John H. Williams, Harvard University and the Federal Reserve Bank of New York; Klaus E. Knorr, Yale University; Michael L. Hoffman, *New York Times*

Discussion: James W. Angell, Columbia University; Theo V. Surányi-Unger, Syracuse University; Frank Whitson Fetter, Northwestern University

2. *Economic Progress: General Considerations*

Chairman: Adolph Lowe, Institute of World Affairs, New School for Social Research

Papers: Sol Tax, University of Chicago; John E. Sawyer, Harvard University; Henry W. Balgooyen, American and Foreign Power Company, Inc.; Joseph J. Spengler, Duke University

Discussion: Paul A. Baran, Stanford University; Theodore W. Schultz,[1] University of Chicago

Thursday, December 28, 1950

9:30 A.M. 1. *The Economy of the Soviet Union*

Chairman: Calvin B. Hoover, Duke University

Papers: Lazar Volin, U. S. Department of Agriculture; Joseph A. Kershaw, The RAND Corporation

Discussion: Evsey D. Domar, Johns Hopkins University; Naum Jasny, Soviet Economic Study Group; Edward Ames, Amherst College; Harry Schwartz, Syracuse University

2. *Economics of Medical Care: I. The Problem*

Chairman: Paul R. Hawley, American College of Surgeons

Papers: Eli Ginzberg, Columbia University; Franz Goldmann, Harvard School of Public Health; Herbert E. Klarman, Hospital Council of Greater New York

Discussion: Louis A. Reed, Public Health Service, Federal Security Administration; Calvin W. Stillman, University of Chicago

3. *Economic Stabilization*

Chairman: Chester A. Phillips, University of Iowa

---

[1] No manuscript received.

7. Such a market as the labor market or the market for a good sold in several grades and under a variety of brands may perhaps best be conceived as consisting of a group of little markets, each a monopoly, but each in competition with the others, subject to a certain frictional resistance in shifting from one market to another.

These seven propositions were leading points in the here-and-now phase of institutionalism twenty years ago, and on each of them institutionalism has made something of a sale. Since 1940, developing an aggregative model that will be a good statistical fit for purposes of annual or quarterly forecasts of the national income and product account has come to be a major occupation for a number of economists. Current Keynesian models constitute what may fairly be called a version, though a somewhat expurgated version, of Mitchell's theory of business cycles. Also they treat consumer demand as passive rather than as ultimate prime mover, recognize the cyclical impact of the export balance, and leave ample room for factors other than money and credit to account for changes in the level of wholesale commodity prices. Still further, shortly after 1930 monopolistic-competitive models—thanks to Chamberlain and to some extent also to Robinson—became a generally accepted part of model analysis.

What happened to the seven quoted propositions suggests that the institutionalists gained a signal victory. But really they succeeded in selling to the model analysts—or to a good many of them—only those planks in the institutionalist platform that could most readily be translated into the language of model analysis and put up in neat geometrical or algebraic packages. With the rest of their platform they did not have much success. Their victory was of very limited scope.

However, one result of this limited victory was a right and left movement. In the twenties implicit model analysis had been predominantly rightist in its outlook. By the forties the center of gravity of model analysis had shifted somewhat to the left. During the twenties most of the criticism of the prevailing form of economic theory was leftist. During the past decade most of it has come from the other side of the aisle. It would be an overstatement to say that, with the shift in the center of gravity of economic theory, there is no left left. Rather, the voices of those who objected to this shift and to the model changes underlying it have been raised so loud that they have almost drowned out the voices of the institutionalists.

Such a political way of speaking emphasizes the policy aspect of this development. I think rightly so. It is true that each of the seven institutionalist propositions I have listed refers not to economic policy but simply to the way our economy operates. And to the extent that model analysis has made concessions to these institutionalist propositions the changed models mean changes in the prevailing way of describing economic behavior. It is true, too, that the critics from the right have, for the most part, directed their attacks against these revised descriptive generalizations. Nonetheless, I think the policy aspect of what has happened should be emphasized.

If relatively little has been heard from the institutionalists during the past ten or fifteen years it is not because they succeeded in selling a major part of their platform. They did not. Nor is it because the critics from the right have succeeded in attacking the revised descriptive generalizations so cogently. If there were time I should like to take apart some of the criticisms that have been most favorably received. They are not peculiarly free from logical fallacies. More importantly, they depend on premises that are currently points at issue. And certainly they make little attempt to argue the case on the basis of statistical findings of fact.

One cannot account for the right and left movement of the past two decades in purely objective terms alone. One cannot overlook the changed policy implications of the prevailing school of model analysis. The criticisms from the right during the forties were not well received because they were especially well presented. Rather it was because they found a receptive audience. And the audience was receptive mainly because it disapproved the policies the new description implied. If this finding from the most recent chapter in the history of economic thought is correct, it is a sad commentary on the aspirations of economists to make their inquiries truly objective and scientific.

But this is not the end of the chapter. Institutionalists did not find the new descriptive generalizations an unmixed improvement. On at least one count a number of them joined in the criticism. Veblen, it is true, propounded a secular stagnation hypothesis. But many of his followers did not go along with him in this respect. During the twenties and forties and even during the thirties they regarded such a view of the way our economy operates as a form of historical myopia.

Under the circumstances it is little wonder the voices of institutionalists have not stood out clearly during the past ten years.

Thus far our examination of the recent history of economic thought has proceeded without regard to the division of academic labor. Keynes proposed a radical change in this respect—a change that has found wide support. I refer to his distinction between macroeconomics and microeconomics.

By and large, institutionalists are disposed to welcome this proposal. However, they tend to feel about it as they feel about many other Keynesian proposals: that it is something of an oversimplification. Economic theory has three broad aspects. The Keynesian proposal for a revised academic division of labor deals with these aspects somewhat unequally.

Let us note what these aspects are and h
impinges on each. Then let us briefly reconsi
economic thought under each of these three heads.

First, economic theory must be concerned with
cal and social theory. Economics is a part of the fiel
and economic theory must deal with the relations o
whole. The Keynesian proposal is silent here.

Second, economic theory must be concerned with its
ons to the special branches of economics. The Keynesian proposal has implications for this phase of economic theory; but the implications have not been spelled out. Microeconomic theory must have a particularly close relationship with the special branches of economics, because for the most part these branches deal with microeconomic facts. Keynes did not say what this relationship should be. Should the theorist tell the special branches what questions to study, or should he try to build generalizations out of the common elements in their several findings?

Third, there is an area between these two in which economic theory ought to be pursued on its own account. Keynes's proposal narrowed this area by assigning a part of it to microeconomics, and broadened it by including in it the major operations of our monetary and credit system. The broadening, though not the narrowing, was clearly suggested by some of the seven propositions quoted above. But most institutionalists will enthusiastically support both proposals.

Now let us briefly re-review the recent history of economic thought under these three heads.

First, as to the relations of economic theory to social theory broadly conceived, we have said that implicit model analysis has become explicit. Of course this change has been one of degree. Many economists still abstain from expressing themselves in algebraic and calculus terms. And many who use them do not feel this way of putting things is adequate to express all they have to say. Nonetheless, the change has made economic theory a much more esoteric subject for workers in our sister social sciences. No doubt this situation has been aggravated by the fact that frequently economists who have used algebraic symbols for economic quantities have not identified these quantities with concrete statistical facts. Cultivation of the borderline areas between economic theory and the rest of social theory has thus been hampered. Further, economists have done less such cultivation. Let me illustrate. During the twenties there was a great deal of interest in the legal foundations of our economic order. Commons made significant contributions to our understanding of this important borderline area. But latterly economic theorists have given little attention to it; they have been too preoccupied with mathematical model analysis.

[illegible] level of the relations of economics to other social sciences, [illegible] institutionalists have lost ground during the past fifteen or twenty years. Let us take up next their record at the macroeconomic level. They have done much better here. In fact, practically all the gains in connection with six of the seven propositions cited above are on the macroeconomic level. On the whole it is easier to translate institutionalist contentions into the language of model analysis at this level than on the higher one just considered or at the level of microanalysis.

So far as macroeconomics goes, the prevailing school of model analysis and institutionalists are in broad agreement on two points:

1. Hypotheses should be put in a form that will fit existing data.

2. Equations that do not lend themselves to empirical exploration are commonly lacking in objectivity and definiteness of meaning; it is unwise to depend extensively on such subjective equations in economic analysis.

Institutionalists and empirically-minded model analysts agree on these two points. But what I propose to call "nonempirical" model analysts do not. For the most part, but not entirely, nonempirical model analysts can be identified as the critics from the right.

It is ungracious to give only a single illustrative quotation to make clear the nature of the issue here, but time presses and at least one illustration is needed. Let me quote from Fellner's chapter in the *Survey of Contemporary Economics*. I am sure he speaks for a significant number of economists. In reference to models designed to provide a theory of aggregate demand and employment he says: "The savings-investment approach . . ., if expressed in terms of simultaneous realized magnitudes, either . . . possesses no significance *per se* . . ., or it implies that the . . . *ex post* (realized) magnitudes equal the *ex ante* (planned or expected) magnitudes."

I disagree. If every aggregative model in simultaneous variables were true by definition, as this statement and its context clearly imply, they would all be perfect statistical fits. None of them is. We do not yet have one that is a really good fit. And as for the aggregative *ex post-ex ante* equation, this has quite a number of proponents, but it seems to me another case of agreement on a form of words without much concern for what the words mean. Certainly we need data on plans, commitments, and expectations in business conditions analysis. In recent years substantial progress has been made in assembling such information, but we are still a very long way from having enough of it to make an aggregative *ex post-ex ante* equation really objective and definite in meaning.

This quotation, however, is only an illustration. More broadly the issue seems to be precisely that posed by Mitchell in his presidential address over a quarter of a century ago: shall we aim to make economics an empirical, scientific study of the way our economy and other similar economies operate? Empirical model analysts and institutionalists say yes. The main alternative to so doing—the alternative I think most nonempirical model analysts advocate—is to make it an exercise in deductive reasoning—in reasoning the relevance of which to our present economy must necessarily be a moot point.

This issue, of course, involves microeconomics as well as macroeconomics. But I have incorporated it here because it is on the macroeconomic level that most of the clashes between the two schools of model analysis have occurred.

I think the agreement between institutionalists and empirical model analysts on the two basic points just mentioned may eventually compel them to get together in other respects. But there are at present sharp differences—differences that have come out especially in discussions of current business conditions analysis and forecasting. The basic issue in these differences is both old and broad: how much of the field of economic theory does model analysis encompass?

Empirical model analysts would like to discover a model in n variables and n equations that gives a good statistical fit to a series of business cycles—as long a series as possible. Of course no one expects to find a perfect fit—only to minimize the errors by getting a best fit. Further there are great difficulties in making the number of equations equal to the number of variables. Efforts at statistical fits have been almost entirely confined to models that treat some variables as exogenous. Both the use of exogenous variables and the recognition that fits will not be perfect suggest that no two cycles are just alike.

During the twenties a number of the critics of Mitchell's theory of business cycles said that it was not a theory. Presumably they meant he did not express his theory in terms of a model. He refused to do so because he was impressed with the differences between one cycle and another.

Empirical model analysis can do something to account for such differences—something but not much. Its main recourse is to introduce a secular trend into each of the parameters in the model.

This suggests two phases of the basic issue between empirical model analysts and institutionalists. First, is it part of the economic theorist's job, in analyzing business cycles, to try to account for what goes on outside the model? Institutionalists answer yes. Nonempirical model analysts answered no in the twenties and presumably still do. Empirical model analysts surely hope to take account of some of these outside facts by improving their models so as to cover them. They are less clear how far the economist should deal with such facts before the models are improved.

The second phase of the issue is this. How much of what goes on in business cycles goes on outside the model? The candid answer is: at present most of it. But when models are improved, it may be much less.

Still I think it is well to note four restrictions under which empirical model analysis operates:

1. It cannot do much with the secular trend. Trend extrapolations are too hazardous.

2. One reason why Mitchell insisted that cyclical history does not quite repeat itself was that sporadic variations in economic time series play a significant part in business cycles: wars and strikes, bumper crops and crop failures, floods and droughts, etc. Empirical model analysts cannot do much to forecast the progress of a war or a strike. At best they can trace the effects of sporadic variations in time series by making them exogenous variables.

3. If one seeks a model that will give a reasonably good fit to the data for a series of years or quarters, he must restrict the number of variables he employs. Such a restriction is partly one of expediency. A complicated model becomes unwieldy. But to some extent it is inherent. He must employ the same number of variables for each year or quarter covered by his data.

Institutionalists insist on using in cycle analysis a very much larger number of time series than can easily be handled in a formal model. They insist also on taking account of new series as they become available and on resolving aggregate quantities into different components in different periods so as to isolate the significant factors in each period.

4. Finally, empirical model analysis can do very little to take account of pertinent qualitative facts. The years of wartime rationing are awkward to fit into a consumption function. The establishment of the U. S. Steel Corporation as a market leader and the inauguration of the Federal Reserve System have undoubtedly had significant effects on the way our economy operates. Empirical model analysts cannot hope to do much toward tracing these effects.

Nonetheless, we can and should confidently expect that empirical models will someday do a good deal more to tame the unruly facts of business cycles than they have to date. But there remains the question what to do in the meantime. For the immediate future I think we will do well to recognize that the analysis of business cycles must be largely a form of historical analysis. It must analyze developments of a qualitative nature, analyze sporadic variations in time series, and analyze the behavior of exogenous variables. It must work with a large and ever changing set of time series.

So much for macroeconomics. Microanalytic models are not markedly more realistic today than they were twenty years ago. The empiricists have concentrated so much energy on the aggregative level that there has been relatively little exploration of microeconomics through empirical models. The chief concession to institutionalism has been the development of the nonempirical monopolistic-competitive model. But this is only a gesture to realism. What it means is that those who go in for intellectual gymnastics now have a new piece of apparatus in their intellectual gymnasium.

Unfortunately, this new piece of gym apparatus is much more familiar today then the general theory of cost and price which Clark built out of findings common to the study of railroads, taxation, and other special branches of economics. He did not put what he had to say in a neat mathematical package. But he said a great deal that was new and important: about how to measure and estimate cost and what is a unit of business; about the typical long-run cost curve and the typical production function; about the bearing of cost differentials on price differentials; about private versus social cost accounting; and on other subjects.

Clark's *Economics of Overhead Costs* is not the only institutionalist contribution to a realistic microeconomics; nor is it confined to microeconomics. But it is much the greatest institutionalist contribution at this level.

In conclusion, let me add a brief injunction to this review. I think it is urgent that economists should again turn their attention to those phases of economic theory that lie outside the scope of present model analysis. On the highest level, this means that economic theorists should once more cultivate intensively the borderline areas of their subject, such as that between law and economics. At the aggregative model level this means, so far as empirical current business cycle analysis is concerned, that they must tackle the whole job, not just the small part that present models can deal with. And particularly at the microeconomic level it means that they should emphasize the empirical meaning of their findings and give somewhat less consideration to the neatness and impressiveness of mere forms of words.

VEBLEN AND THE SOCIAL PHENOMENON OF CAPITALISM

By ABRAM L. HARRIS
University of Chicago

The place of Thorstein Veblen in the history of economic thought is similar to that of Marx, Sombart, and Max Weber. Like these writers he sought to give a genetic account of capitalism, or the enterprise system, as a unique mode of economic organization and, also, to set forth the motivations and institutions peculiar to this system. A comparison of Veblen's ideas with those of the writers mentioned would be illuminating with regard to his virtues and shortcomings as an economist and a historian of capitalism. Such a comparison, it is needless to say, cannot be undertaken in a short paper. We propose simply to examine Veblen with respect to: (1) his philosophy of history which, looking backwards, seeks to account for capitalism in terms of the institutionalization of certain psychological motives or traits of human nature and which, looking forward, projects as the desirable next step in social progress an alternative system controlled and guided by scientific experts—the engineers and highly skilled workmen; (2) his theoretical analysis, which seems to be offered as a substitute for traditional economic theory on the grounds that the latter is "unscientific" and, for this reason, unable to give a realistic account of the motivations and operations of the enterprise economy; (3) his conception of scientific method in economics; and (4) his program of economic reform. These four phases of Veblen's thought, though closely interrelated, deserve separate treatment, but in this paper we shall consider them more or less together.

Veblen seemed never to tire of asserting the scientifically objective character of his inquiry; and admiring students of his work, taking his "Olympian aloofness" at face value, would perhaps deny that he had a philosophy of history or a theory of social reform. There is of course much guile and make-believe in Veblen, and in studying him one should be alert to his tongue-in-cheek artfulness. Still this should not render us purblind to the fact that what he presented as a "matter-of-fact" inquiry into "brute" causation is substantially a critique of existing economic institutions and theories which rests upon thinly concealed value judgments, assumptions, and preconceptions concerning the past and the desirable course of future progress.

Veblen seldom used the term capitalism or capitalist system. He usually spoke of the price system or the system of business enterprise which, of course, amounts to the same thing. The system of business enterprise is held to operate in conjunction with two other institutions: the "machine process" or the "mechanical system of industry" and the "national establishment" or the modern state. These three institutions, Veblen tells us, are "the sovereign action-patterns" which "govern the secular life among the peoples of Western civilization." Christian morality seems to constitute a fourth institution, but Veblen brings this into his analysis somewhat adventitiously. One of Veblen's main assumptions is that the discipline of these different institutions generates different social habits among the classes of persons who are mainly occupied with them in getting a livelihood. Business enterprise is thus analyzed with respect to the harmony or conflict which is thought to exist between the habits and norms of conduct enforced, respectively, by it and the other institutions. Business enterprise is defined as a pecuniary organization primarily concerned with profits and prices. It is based upon private ownership and, hence, fortified by the state, since the principles of the state and, likewise, those of private ownership are grounded upon natural rights. The machine system of industry, however, embodies the "technology of physics and chemistry," and the principle of its operation is "opaque" mechanical cause and effect. The machine process is motivated by technical efficiency as an end. The operations of this mechanical process and, in consequence, the community's industrial efficiency, Veblen holds, is constantly interrupted, restricted, and diverted by the private owners of industry in the quest for profits. Veblen thus thinks that as a motivation in economic life, technical efficiency is conducive to maximum material welfare, while the quest for pecuniary gain is incompatible with this end.

The idea of technical efficiency plays a central role in Veblen's philosophy of history. It is intimately connected with the conflict in social habits which he thinks lies back of social change. And it is the basis of his evaluation of economic theories and institutions. Veblen failed to consider the fact that even if economic life came to be organized under the guidance of engineers, as he thinks desirable, the technically best would not always be the economically most feasible. Under a technocratic as under a capitalist arrangement, the efficiency of machines as well as of human beings would have economic significance only in terms of the production of values, and this significance would reflect the fact that under given conditions an increase in physical output would necessarily have diminishing importance. Furthermore, mere technical efficiency can never be a guide to production; that is to say, to economic efficiency. The questions of what goods are socially the most desired and of the order in which they should be produced can only be determined on the basis of the relation of input to output, and the question of this relationship is essentially a value problem about which technical efficiency per se can tell us nothing.

Veblen's theory of social change is based on the view: (1) that social culture is shaped by material conditions, but that the changes go forward in the form of social habits and customs that become crystallized into institutions in the group's repeated responses to its surrounding environment; and (2) that institutional growth and change take place according to neo-Darwinian canons of "selection" and "survival." We have noted that Veblen contended that the discipline exercised by institutions upon the persons habitually employed with them manifests itself in the form of social habits. On the basis of this contention, he attempts to account for social changes in terms of a conflict in social habits induced by the discipline of divergent institutions. Institutions are ultimately the result of the interaction between human nature and the material environment. Overlooking climatic and topographical features, the material environment is made up of the state of the industrial arts, comprising, on one side, natural resources, tools, and domesticated plants and animals, and, on the other side, immaterial knowledge resulting from inventions and discovery. The irreducible elements of human nature are instincts—a term which Veblen uses rather loosely. The five instincts or native proclivities given by him are: the sense of workmanship, the parental bent, the self-regarding disposition, pugnacity, and idle curiosity or the disposition toward "aimless" impersonal inquiry.

In the struggle for existence these instincts, it is held, become organized into social habits, but the extent to which any one of them enters into the composition of habits is a matter of selective adaptation induced by changes in the material conditions of life. Since the instincts are held to vary with respect to their importance to technical efficiency and the material welfare of the community, the habits resulting from particular combinations of instincts will vary accordingly. For example, habits which are due primarily to a combination of the instinct of workmanship and the parental bent are on the whole conducive to mechanical efficiency and output, since the instinct of workmanship tends toward an "impersonal economical use of resources" while the parental bent expresses a "bias" for serviceability. But habits in which pugnacious and self-regarding elements are predominant tend to be invidious, emulative, and predatory.

Veblen thinks that in the evolution of Western economic institutions two conflicting types of habits have been generated: the warlike, predatory, invidious or competitive, on the one hand, and the peaceful and noninvidious, on the other. Looking backward, he finds that these conflicting habits are represented in the early stages of Western culture by two opposing types of society: "the peaceable communistic régime of primitive savagery"[1] and the warlike barbarian culture. In the primitive savage community tools and implements, while not highly developed, "served chiefly to shape facts and objects for use rather than for inflicting damage and discomfort." The "dominance of a sense of group solidarity" precluded self-regarding and invidious canons of conduct and taste. There was no private property or class stratification. Rivalry existed, but the conditions favoring a predatory life were absent; so that the emulation between members of the group ran its course in terms of workmanship. With an improvement in technology and the resultant growth in surplus wealth primitive savagery gradually receded before the emerging culture of the predatory barbarian. "With the advent of predatory life comes the practice of plundering the enemy and seizing his women and movable property." According to Veblen, when the practice of seizing women has hardened, "the captor comes to exercise a customary right to exclusive use and abuse of the women he has seized." Gradually, this habit of the "right to exclusive use" becomes extended to other categories of things, and as a result ownership resting upon tenure by prowess is established. In contrast with primitive savagery the barbarian culture rests upon "exploit" and invidious distinctions between the warrior and priestly castes, who "engross" the community's industrial efficiency, and the underlying population, whose workmanship supplies that efficiency.

Now, since these behavior traits that manifested themselves instinctively and habitually in these early cultures make up the spiritual inheritance of the people of Western civilization, any change in the material conditions of life of these people can take effect only in terms of this inheritance. But the population of the West has resulted, Veblen thinks, from the admixture of more than two racial stocks or mutants, which have survived because of their fitness to meet changing material and cultural circumstances. Although the crossing of these stocks has left intact a "generic human type," fixed by the aforementioned native traits and habits, the permutations and combinations of these native elements will vary endlessly among the individuals that make up the population, since these individuals are hybrids. But Veblen insists that "disserviceably wide departures from the generically human and serviceable type of spiritual endowment will tend constantly to be selectively eliminated from the race."

---

[1] In discussing my paper, Mr. Dorfman objected to this phrase, "communistic regime of primitive savagery," and supported his objection with Veblen's statement that a state of primitive communism is unknown in human history. But the phrase, "peaceful communistic regime of primitive savagery," is Veblen's, not mine. See "The Beginnings of Ownership," *Essays in Our Changing Order*, by Thorstein Veblen, ed., Leon Ardzrooni (New York, 1934, p. 44). In the statement quoted by Mr. Dorfman, Veblen denied the existence of common ownership of the means of production in primitive society. But Veblen was referring to consumption when he characterized primitive savagery as "communistic." He states: "In these very rude early communities, especially in the unpropertied hordes of peaceable savages, the rule is that the product of any member's effort is consumed by the group to which he belongs; and it is consumed collectively or indiscriminately, without question of individual right or ownership." *Idem.* Veblen seems to think that the idea of ownership is altogether foreign to primitive savagery. In "the primitive savage horde, the population is not divided into economic classes. There is no leisure class resting its prerogative on coercion, prowess, and immemorial status; and there is also no ownership." *Ibid.*, p. 43.

The anthropology from which Veblen derived his theory of three European racial types that differ in both physical and mental characteristics has long been discarded. And his belief that racial types possess "native characteristics" that are transmissible in the same way that biological inheritance is, was arrived at by a very questionable application of the doctrine of biological evolution to human culture. Furthermore, there appears to be no evidence to support his thesis concerning the existence of his two prehistoric cultures. If there is any, Veblen does not supply it. His thesis seems to rest upon conjectural history for the use of which he severely lampoons classical economics.

The idea of a state of primitive savagery, like that of an instinct of workmanship, holds a peculiar fascination for Veblen. Its role in his philosophy of history and theory of social change is somewhat akin to that of the "state of nature" in the doctrine of natural rights which Veblen criticizes. Just as the instinct of workmanship is held to be "the more generic, more abiding trait of human nature," so likewise is the "discipline of savage life" held to be "the most protracted and probably the most exacting of any phase of culture of the race." Thus Veblen believes that by heredity human nature is still basically savage, and that by virtue of the biologically unstable character of the racial stock, the chances of a reversion to savage nature are always great. Moreover, he thinks that the dispositions peculiar to savage human nature are still strong because they have been reinforced by the Christian principle of "mutual service" or "brotherly love." This Christian principle, Veblen holds, contains the idea of "serviceability to the common good" and in its elements is also a "deeprooted culture trait," appearing "to be nothing else than a somewhat specialized manifestation of the instinct of workmanship." Thus "the ancient racial bias" of the savage has come to be embodied in the Christian principle of brotherhood. It is incompatible with the "pecuniary morals of competitive business" and "should logically continue to gain ground at the expense" of this regime.

Veblen's theory of social habits rests upon a rather arbitrary determination and classification of instincts. After noting that the instinct concept is shifty and lacking in precision, he proceeds to impute a definite purposive end to each of the instincts he enumerates. It is only by virtue of such imputation that he is able to say what kind of habits any given combination of instincts will produce. He does speak of a "contamination" of instincts. But he can still set up his polarity of habits simply by assigning predominance to one or more instincts whose value and ends he has predetermined. It is only by this teleological arrangement of habits and instincts that Veblen is able to construct two opposing types of prehistoric culture and two historically antagonistic modes of economic activity: the acquisitive or predatory; the industrial or productive. And it is clear that Veblen's evaluation and critique of modern economic institutions and theories revolve around this conception of opposing modes of economic activity and the habits associated with them. Although they rest upon a "technology" and a "systematization of knowledge" wholly different from that of any previous culture, the "machine process" and "business enterprise" represent in modern society the historic antagonism between productive and acquisitive modes of economic activity. And the habits of "industrial efficiency" and of "exploitation" associated with these respective types of economic activity are analogous to the habits of thought which Veblen finds characteristic of primitive savagery and the barbarian culture.

Veblen's analysis of the phenomenon of capitalism was not entirely confined to a psychological exposition of what he considered to be the motivating principles and habits of the enterprise system. A considerable part of his investigation dealt with questions concerning the organization and functioning of the system. His views on these questions were based mainly upon governmental and other investigations of corporations and high finance in the trust-busting era. They are set forth in his discussions on loan-credit and overcapitalization as factors in business cycles. It is impossible seriously to consider his treatment of those subjects in this paper which is already longer than the author intended. But since Veblen thought that the shortcomings of orthodox economic theory are due, at least in part, to mistaken conceptions of business operations, some light will be cast on his view of these operations by a consideration of the defects of traditional theory as he saw them.

By Veblen's standards of scientific method, classical and neoclassical economics are unscientific. According to him modern science, under Darwinian influences, takes as its prime postulate "the fact of consecutive change." Modern science thus demands, he contends, a genetic account of phenomena; in other words, a "theory of a process of unfolding sequence." Scientific inquiry is essentially matter of fact. It knows no ultimate or final term—this being ruled out by the factor of consecutive change. It is therefore content to formulate the process of cumulative change, mechanically, in terms of "opaque" cause and effect. In economics the process of cumulative change to be dealt with is "the sequence of change in the methods of doing things"—a change, that is to say, in the "ways and means of turning material objects and circumstances to account." If then economics is to be scientific, it has to investigate this mechanical process and formulate the movement of it in the causal matter-of-fact manner of the physical and biological sciences. But this, Veblen holds, is precisely what traditional economics is unable to do, because of the character of its subject matter and its methods of dealing with it.

In Veblen's conception classical and neoclassical theory is concerned only with questions relating to pecuniary transactions. In his words: "The normal economic community upon which theoretical interest has converged, is a business community, which centers about the market and whose scheme of life is a scheme of profit and loss." Thus by virtue of its preoccupation with issues connected with this business scheme, traditional economics lies outside the sweep of the discipline of the machine process and is unable, therefore, to formulate a theory relating to changes in "the methods of dealing with the material means of life."

It is not only the subject matter but also the preconceptions and methods of classical economics that are held to be unaffected by the discipline of the machine and, accordingly, of modern science. In classical economics, the "sense of truth and substantiality is not satisfied with a formulation of mechanical sequence," because the ultimate term in its systematization of knowledge is "natural law." This natural law in the guise of "controlling principles" is thought to exercise "a constraining surveillance over the trend of events." Thus the preconception of "natural law" imputes to things and events "a consistent propensity tending to some spiritually legitimate end." Veblen holds that although in the later formulations of classical doctrine by such writers as Marshall and Clark the conception of "normal" tends to supplant that of natural law, the outcome is not substantially different. These later economists not only are concerned to ascertain "what is normal and to determine what consummation answers to the normal but are at pains to approve that consummation." Thus even in the late classical doctrines "the normal tends unavowedly to be identified with the right," and there persists an acceptance of the uncritical conviction derived from the idea of natural law that there is a meliorative trend in the course of events. The "benign order of nature" in which this trend tends to be consummated is none other than the normal regime of laissez faire and of "perfect competitive acquisition."

Whatever may be said about the connection between Adam Smith's notion of "invisible hand" and the idea of a meliorative trend, the theme underlying Ricardo's rent theory and Malthus' population thesis is obviously pessimistic. And, when we come to the classical economists in the late nineteenth century, it is difficult to find anything in their writings suggestive of a belief in a meliorative trend. Under the influence of Ricardo and Malthus, J. S. Mill was constantly urging that thought be taken to abort the evils of overpopulation and the stationary state. And Marshall, viewing history in the perspective of a law of diminishing returns, was haunted by the specter of the dire effects of this law upon human progress. It is of course true that the writings of Marshall, Clark, and, to some extent, Mill contain not merely a scientific explanation of the working of capitalism but also statements justifying the system. But none of these writers considered that the organization of economic activities by means of the market and enterprises conducted for profit was the definitively adequate mode of economic life. All three of them considered future economic progress to involve conscious co-operation in the form of industrial copartnership, supplementing and even taking precedence over the unconscious co-operation effected by enterprise competition.

According to Veblen, this "belief in a meliorative trend" or a "benign order of nature" is closely connected with the classical school's hedonistic conception of human nature. He states that the notion of a meliorative trend and the hedonistic psychology "are so related as to stand or fall together." Thus "given an indefeasible meliorative trend in events, man is but a mechanical intermediary in the sequence. It is as such a mechanical intermediate term that the stricter hedonism construes human nature." Veblen of course had no great difficulty in making short shrift of hedonism as a psychological theory and in setting forth its limitations as an ethical doctrine. In his day psychological research had shown that human nature is far too complex and unconscious in its motivations to be explained in terms of a calculus of pleasures and pains. Moreover, economists had themselves come to question the ethical dogma that freedom to pursue one's self-interest necessarily coincides with the collective interests of society. But despite its erroneous psychology and the confusion in its reasoning on ethical questions, hedonism sought to supply an argument in defense of individual freedom. The exponents of hedonism thought of freedom not as a good in itself, as they should have, but rather as instrumental to pleasure and thus to be contended for on the ground that the individual is a better judge of the means to his own happiness than are government officials or other individuals. The merits of this argument are not discussed by Veblen, but from his remarks on laissez faire one gathers that he attached little weight to it. The essential content of laissez faire is contained in the principle that the individual should within limits make his own decisions and abide by the consequences of them. But the validity of this principle has no necessary connection with the tenability of hedonism as an ethical doctrine. If freedom is considered a social value, as it should be, it must be prized as a good in itself and not simply as an instrument to pleasure. There is nothing in Veblen's remarks on hedonism to indicate that he considered individual freedom such a value, and one is rather perplexed by his failure to discuss in any place the conditions necessary for the realization of freedom in economic life.

The two specific theories of traditional economics against which Veblen directed his fire are marginal utility and the marginal productivity explanation of distribution. When his essay on "The Limitations of Marginal Utility" is read in conjunction with his book, *The Theory of the Leisure Class,* the gist of his argument runs somewhat as follows. As a motivation in consumption the principle of utility assumes that choices are consistently made with a view to some tangible or concrete result which is intended or desired for its own sake. That human beings may sometimes act in this manner is undeniable, but the idea that they normally do so is unsupported by modern psychology. The student of modern psychology takes the view that the concrete aims of action are valued and desired as symbols of prestige and social status. Thus in consumption, goods and services are generally valued, not for their own sake, but for what they signify in social relations. In utility theory the stress is upon the rational element in human behavior, whereas modern psychology emphasizes habits and customs in unconscious motivations and caprice in conscious motivations. Veblen would therefore say that in both consumption and production there is a large element of emulation and sportsmanship. In entertaining this view he certainly anticipates the idea that economic motivations are to a great extent analogous to those of a game in which the aim of the participants is "to win" rather than to achieve some concrete tangible result. All of which is logical and not at all inconsistent with views presently held by most theoretical economists. But the same cannot be said for Veblen's criticism of the classical distribution theory.

In his criticisms of the productivity theory of distribution, Veblen took as the special object of his attack the ideas expressed by John Bates Clark. But his criticisms are so couched that they must be taken as applying to anyone who holds to the marginal productivity theory, wholly irrespective of the manner in which he may formulate the theory. Any theory which imputes to the so-called "factors of production" relative contributions to output, and which on this basis seeks to determine the shares of income earned by the factors, is repugnant to Veblen's scheme of values. Veblen contends that since the output to which the factors are said to contribute must consist of exchange values and is therefore intangible in character, a "quantitative" determination of a factor's contribution is scientifically impossible. He contends further that if it is argued that a quantitative determination of exchange values is not impossible, the validity of the postulate that competition effects an equivalence between the contributions of and the returns to the factors "cannot be demonstrated in any terms that will not reduce the whole proposition to an aimless fatuity."

Veblen's criterion of productivity is of course mechanical efficiency or tangible performance. This criterion is the basis of his contention that the "productive contributions" that economic theory seeks to determine are quantitatively immeasurable. He, accordingly, holds that since "productivity," in the classical meaning of the term, can only refer to pecuniary transactions of the market, a productivity theory, for example, of wages simply states that the value of labor is fixed by the individual employer in terms of the "vendibility" of his product. Veblen seems to think that in large-scale industry, the individual employer is generally a monopolist in the sale of products and a monopsonist in the hire of labor. According to this viewpoint the individual businessman is held to possess, therefore, a large amount of discretion in fixing his prices and wage rates. Veblen attempts no serious analysis of the extent of competition or of its limitations as a social institution. His view of business operations is simply a sophisticated version of the popular or, perhaps one should say, the populist, conviction that in buying and selling the businessman pays and charges "what the traffic will bear."

The businessman, as Veblen describes him, is neither an innovator as in Schumpeter's meaning nor the bearer of enterprise uncertainty as in Knight's analysis. The businessman has become an absentee owner who is no longer engaged in the management of industrial operations. He is typically a "Captain of Industry" concerned mainly with questions relating to bargain and sale. And, since, in Veblen's definition, "bargain and sale" contribute very little to "production," there is no way of determining the businessman's income on the basis of his "productivity." The fact that the outcome of all business undertakings and operations is frought with uncertainty and, also, the fact that the assumption by the businessman of this uncertainty makes him unique among productive agents, find no place in Veblen's discussion. In other words, Veblen has no theory of entrepreneurship and, for all of his animadversions against classical doctrines, his theory of profit is cast in terms of the classical wages of management. "Profit" when conceived in the form of the wages of management is perfectly acceptable to Veblen, since he can justify it as payment for a "tangible" and, therefore, a "productive" service. He does not take into account: (1) that however economic life is organized, a determination must be made of the value of the contribution of the various resources to production; (2) that such a determination can never be made in terms of physical units, either of human energy or mechanical power; and (3) that values will in any case be assigned to the productive contribution of the resources, either on the basis of market competition, by political authority, by the pressure of organized bargaining groups, or by some combination of these three.

Veblen's adherence to a physical approach to production prevents him from carrying some of his otherwise penetrating insights to their logical conclusions. For example, in calling attention to the nature of capital goods, he notes that these goods are the embodiment of the immaterial wealth of society; in other words, of knowledge of ways and means resulting from education, discovery, and invention. If this idea of the nature of capital goods is consistently adhered to, the classical distinction between land, labor, and capital, and thus between rent, wages, and interest, would in principle have to be somewhat modified. For it would be evident: (1) that the productive power associated with any one of the factors would, in final analysis, represent knowledge, discovery, and invention; and (2) that the productive power of capital goods (including land) and, likewise, that of human beings results from saving and investment which make possible the maintenance and replacement of existing material equipment and the creation of new equipment, in one case, and the rearing and training of human beings, in the other. Still, in any attempt rationally to allocate resources, there would remain the necessity of estimating the value of the productive power which any so-called "factor" represents relatively to the others. The true value of the productive power of any factor would be expressed by a cost representing the value of the time or the waiting involved in bringing this productive power to fruition. Veblen, however, is not interested in the question of investment cost since this must relate to economic values.[3] In his analysis of capital goods he seeks to demonstrate a thesis reminiscent of Marx's dogma of capitalist exploitation; viz., that capital goods are productive only because they are made so by the engineer's and the skilled workman's knowledge of ways and means, and that the private ownership of these goods enables the owners to extract wealth from the real producers.

---

[3] As proof of Veblen's interest in the problem of investment, Mr. Dorfman cites Veblen's idea of "serviceability over cost." All investment (and saving) is the means whereby new productive power is created and transferred to those who desire to use it. It necessitates "abstinence" by society as a whole, the exchange by the members of society of present for future incomes and, hence, an evaluation by them of present in relation to future income. How Veblen's idea of "serviceability over cost" could bear in any meaningful way upon the investment problem as stated is a question on which Mr. Dorfman, I hope, will enlighten us.

In conclusion it will be possible to comment only briefly upon Veblen's conception of scientific method and his program of economic reconstruction. Veblen insists that to be scientific, one must think of human events as a process of cumulative change and in terms of mechanical cause and effect. From this it would seem to follow that a scientific study of social problems must consider human life as consisting simply of mechanical responses to external stimuli. When viewed in this manner human life is robbed of all meaningful content and we are forced to the absurd position of assuming that mere physiological processes have some sort of "survival value."[8] Veblen's idea that production is a question of material usefulness and technical efficiency carries this behavioristic approach over into economics. He holds that material welfare would be greatly improved if the management of industry were placed in the hands of engineers and other technical experts; but if, as he thinks, the operation of industry has already been reduced to bureaucratic routine, management by engineers and scientific experts would only accentuate this state of affairs. Veblen does not tell us how and on what basis his "Soviet of Technicians" would make its decisions, nor does he state how this control by technicians could be prevented from becoming despotic power over the rest of society.

---

[8] Veblen does not strictly adhere to this mechanistic approach. For he thinks that the "survival value" of economic institutions depends upon their contribution to "fulness of life." Although the meaning of the term is left somewhat vague, "fulness of life" seems to consist of something more than material comforts. "'Livelihood' is, of course, here taken in a loose sense, not as denoting the means of subsistence simply or even the means of physical comfort. . . ." Veblen, *The Place of Science in Modern Civilization* (New York, 1930, fn. 9, p. 371).

DISCUSSION

JOSEPH DORFMAN: Professor Harris' paper is rather difficult to handle, because, while the title is "Veblen and the Social Phenomenon of Capitalism," it discusses largely technocracy and the history of economic thought. He begins his main discourse with the assertion that Veblen's work rests upon "thinly concealed value judgments, assumptions, and preconceptions concerning the past and the desirable course of future progress." This is certainly highly questionable, for if they are "thinly concealed," why are there so many different current interpretations of Veblen's views? Incidentally, a large part of Veblen's matrimonial difficulties arose from the baffled attempts of his wives to read his mind.

Professor Harris disposes quickly of a central position of Veblen; namely, his contention that "business enterprise" and the "machine process" do not necessarily work in complete harmony. Professor Harris achieves this by enlarging the meaning of one term and narrowing the other. His interpretation of machine process closely approaches "technical efficiency" as viewed by the exponents of scientific management, whereas Veblen's concept of machine process has the wider meaning of the industrial arts which include not only the arts proper, but the habits, skills, transmission of skills, and the opportunity to develop and advance them. Professor Harris asserts that business enterprise is defined by Veblen as a "pecuniary organization primarily concerned with profits and prices." But in fact, Veblen was concerned with the dominant role of the larger corporations and especially with corporation finance. Strangely enough, in the paper there is only one reference—and that a passing one—to corporations and finance, but it appears in a context that raises a serious question as to the relevancy of Professor Harris' entire discussion. Let me repeat that paragraph. I quote:

> A considerable part of his [Veblen's] investigation dealt with questions concerning the organization and functioning of [enterprise] system. His views on these questions were based mainly upon government and other investigations of corporations and high finance in the trust-busting era. They are set forth in his discussions on loan-credit and overcapitalization as factors in business cycles. It is impossible seriously to consider his treatment of those subjects in this paper which is already longer than the author intended.

It would seem that any critique of a writer's views on capitalism would center precisely on his analysis of the "organization and functioning" of business enterprise. This is especially important in the case of Veblen, since his views have had a definite bearing on what has actually become the drift of policy and economic theory. On policy making, some of you may recall the dispatch of the Washington correspondent of the *Christian Science Monitor,* when the Securities and Exchange Commission began issuing its decisions. In his column he wrote that if these decisions were to be fully understood, one must read Veblen's works, for the majority of the commissioners were obviously Veblenites. The decisions, by the way, have become a part of the common sense of our day. On economic theory, a good example is Wesley C. Mitchell's *Business Cycles,* which marked a new epoch in economics. While completing that work, Mitchell wrote that the "crucial chapter" (that on the breeding of crises) was "fairly close to Veblen's position; namely a decline in the prospective net earnings leads to shrinkage of business credit and thus brings on a liquidation of outstanding accounts."

It is true that Professor Harris adds after the quoted paragraph:

> But since Veblen thought that the shortcomings of orthodox economic theory are due, at least in part, to mistaken conceptions of business operations, some light will be cast on his views of these operations by a consideration of the defects of traditional theory as he saw them.

I looked here in vain, however, for a systematic critique of Veblen's views on business enterprise. Instead there is a running account, largely devoted to showing Veblen's blindness to the actual views on the social order of the classical school and its successors. At the end of the first large section we are told, for example, that Veblen failed to appreciate that such great leaders as John Stuart Mill, Alfred Marshall, and John Bates Clark held that in the future progress of society "industrial copartnership" would succeed the present system. I presume that Professor Harris is referring to their sympathy for producers' co-operatives, but at least one of a number of ambiguities, if not inaccurate propositions in this section, would be cleared up if he would state that he is speaking of the earlier John Bates Clark of *The Philosophy of Wealth* and not the later Clark of the more familiar *Distribution of Wealth.*

Then Professor Harris discussed Veblen's criticisms of the hedonistic foundations of classical economics. He finds that while Veblen's criticisms of hedonism were sound, the classical economists were only mistaken in treating freedom as an instrument of pleasure and not as a good in itself. Thereby they would have freed their theory of value from any connection with hedonism. This leads Professor Harris to say that Veblen did not "indicate that he considered individual freedom" as a "good in itself" or a "social value." Yet in *Imperial Germany and the Industrial Revolution,* Veblen specifically gave individual freedom the highest tribute by imbedding this "Democratic conception" in human nature as a ubiquitous and persistent "moral bent." And he added that these characteristics "make this trait . . . an invaluable premise in any inquiry into the practicability or expediency of any given scheme of control or any projected line of collective enterprise."

Finally, Professor Harris insists that Veblen has erred fatally in criticizing the applicability of the theory of marginal productivity to the modern order, because that theory must be utilized in any attempt to "rationally allocate resources." How this would be done we are informed in a single sentence:

> The true value of the productive power of any factor would be expressed by a cost representing the value of the time of the waiting involved in bringing this productive power to fruition.

Veblen's error, he concludes, flows from the fact that he is "not interested in the problem of cost since it is a question of values." This ties up with another criticism; namely, that "Veblen failed to consider . . . that . . . the technically best would not always be the most economically feasible." Again, may I say Veblen specifically stated in "The Socialist Economics of Karl Marx" that "in any evolutionary system of economics, the central question touching the efficiency and fitness of any given system of production is necessarily the question as to the excess of serviceability in the product over the cost of production." Veblen went on to say:

> It is conceivable that a competent theory of value dealing with the excess of serviceability over cost, on the one hand, and with the discrepancy between price and serviceability, on the other hand, would have a substantial bearing upon the advisability of the present as against the socialistic regime, and would go far to clear up the notions of both socialists and conservatives as to the nature of the points in dispute between them. But the socialists have not moved in the direction of this problem, and they have the excuse that their critics have suggested neither a question nor a solution to a question along any such line.

One more example of Professor Harris' questionable reading of Veblen is his statement that Veblen presents as a historical reality a "communistic regime of primitive savagery." Yet Veblen specifically says in his essay, "On the Nature of Capital," that "a primitive stage of communism is not known."

In concluding this part of my task, I should like to say that Veblen's subtlety has trapped a number of his critics. An interpretation of Veblen requires careful documentation, for his meanings are often dependent on the specific context of the particular point under examination. This is essential for any relevant critical examination of Veblen.

Let me now turn to Professor Copeland's paper.

Professor Copeland has so cogently and judiciously presented the relations between "model analysis and institutional analysis" that a critic is left with little to criticize. I do want, however, to clarify a few matters. These are concerned largely with the history of institutionalism. There was a movement in the eighties that was something of a spiritual ancestor. Its sponsors organized the American Economic Association specifically to combat the reigning classical economics. One of the most vigorous leaders was John Bates Clark, who felt that there was a real need for a "progressive" association which would include the "younger men who do not believe implicitly in laissez-faire doctrines nor the use of the deductive methods exclusively." As its first president, the Association chose General Francis A. Walker, who was constantly castigating orthodoxy for its overemphasis of an a priori method which achieved a simplicity of classification to which the subject matter was not susceptible. How much that early movement has meant to the growth of our science is evidenced by the fact that the two recently created medals of honor of the American Economic Association bear the name of these two early rebels.

Of what is now called institutionalism, Veblen, along with Charles Horton Cooley, was unquestionably a chief source of inspiration, but I think that it is going too far to say that Veblen characterized regnant "implicit model analysis as bourgeois homiletics." Rather the institutionalist position was that expressed by Walton H. Hamilton in 1915: "Current economic theory as it is commonly understood, is an unconscious expression of an economic art whose fundamental tenet is non-interference."

In general the institutionalists stood for social control and the need for a more realistic understanding of the functioning of the economy in order to make intelligent adjustments. This common concern in social control lead John Maurice Clark, Walton H. Hamilton, and Harold G. Moulton to collaborate in preparing *Readings in the Economics of War* in 1918—a volume whose original title, "Economics of Reconstruction," did more justice to its scope. Because of the highly unrealistic character of the prevailing models in economic analyses, Wesley C. Mitchell developed his procedure of "analytic description." In fact, to its exponents the "newer economics," to use Hamilton's phrasing, began with Mitchell's *Business Cycles* of 1913, for Mitchell substituted an economics of process for one of statics and successfully merged theoretical and statistical inquiry.

Mitchell was by no means alone in the "teens" and twenties in the task of reorientation. There was, for example, David Friday's pioneering contributions on capital formation; and his provocative *Profits, Wages and Prices* (1920) showed how much meaning a few handfuls of figures contained and how much violence they could do to established principles. There was, too, Walter W. Stewart's work in constructing an index of production, developing the research facilities of the Federal Reserve Board, and transforming the *Federal Reserve Bulletin* into a commanding authoritative journal. And his elaborate testimony before the House Committee on Currency and Banking in 1926 and the famous Macmillan Committee on Finance and Industry in England in 1930 did much to end a situation where it could be said that the monetary theorists' dwelling upon monetary factors was the result of lack of familiarity with industrial conditions.

Let me now add one or two direct comments on the paper. Professor Copeland points out some limitations of the "empirical model builders"—notably their inability to take into account all the variables. But I wonder if he was not trying to make the point that they are attempting to give a precise mathematical magnitude to every factor; whereas, for example, Mitchell, fully appreciative of the implications of his underlying Veblenian concept of "cumulative change," preferred to work in terms of the cruder but more realistic gauge: that of "relative importance." I am not sure that I can follow Professor Copeland in his statement that "different descriptive hypotheses regarding the way our economy operates have different policy implications," but I do think an "analytic description" of how it operates narrows the area of controversy over policy.

In concluding, I simply want to say that I think that succeeding generations will make contributions to institutionalism, for as long as our economy is a growing one, there will be need for "analytic description" and adjustments of policy. The current period is one of consolidation of gains, and Professor Copeland does well to note the reconciliation that has in fact occurred. However, an era of the inflexibility of theory may again occur, and then once more there will be vigorous protest, doubtless under a different name than that of institutionalism.

Kenneth H. Parsons: I have had the privilege of reading two of the papers: those of Professors Copeland and Harris. Both of them are provocative and stimulating. Professor Harris' essay is a critical examination of the structure of Veblen's thought. The focal points in Professor Copeland's essay are not so specific, but it is a very strenuous attempt at getting the issues stated which divide institutional and model analysis.

In the few minutes at my disposal I think it better to try to comment on some of the theoretical issues raised in the papers than to attempt any genuine review of them.

Professor Copeland opens his paper with an observation about institutionalism being a peculiarly American approach to economics. The institutional approach, as he pointed out, has been more inclined to inclusiveness than the equilibrium or model analysis, with a persistent interest in the relations of economics to the other social sciences. I should have liked to have had Professor Copeland's suggestions as to why this has occurred. I have supposed that the turbulent growth which has characterized our economic life might be a part of the explanation for this difference. The slower rates of economic growth, coupled with the greater weight of custom and status in the British economy, for example, may very well make a simpler mechanical method of analysis more adequate to that situation than to our own.

At any rate there is an unresolved issue here. The general question might be better put, however, in a slightly different way, as to how comprehensive an integrated analysis is necessary in order to give reliable grounds for judgment. Clearly the classicists and the Keynesians alike have proceeded with much simpler and more mechanical statement of relationships than the institutional analysts. Although the latter is an extremely varied and dissimilar group, it is approximately correct to say that the orientation is toward the inclusion of generalizations regarding all phases of social organization which are involved in the readjustment ingredient to economic problem solving. The treatment of law and property rights is a case in point.

Typically, those in our craft who follow the classical tradition most closely stand by a mechanical type of analysis, most precisely formulated in mathematical terms, with a purely "economic" reference, meaning by that that tastes, technology, etc. are "held constant" so that the only problem is one of "economizing in the use of means" and the only "value" is that of economy.

By contrast, John R. Commons, a thoroughly indigenous thinker, struggled for decades to work out a systematic analysis that would include the basic elements of social organization, public order, and the possibilities of plural values within one comprehensive statement.

If one were to explore this contrast fully, I believe that many of the differences would be resolved upon the ground that those following such seemingly divergent approaches are interested in different aspects of the economic problem. Those following the classical pattern of analysis approach the economy through the conditions of choice in a market enterprise economy. Essentially they are interested in private economics where the value issue is nothing more than preference or desire. Commons, however, was concerned with the general public or social questions—concerned with the structure and proportioning of opportunities and with public policies where the objects of valuation are the working rules, which are the very structure of social organization. However, I doubt if it is possible to effect a complete conciliation of viewpoints merely by acknowledging different foci of interest and purpose. For example, one issue that troubled Commons a lot was that the classical analysis, when directed to policy or social questions, treated the individual as a mere atom, whereas it seemed to him that nothing less than an allowance for genuine volitional conduct and "institutionalized" personalities was adequate for social analysis.

I do not find it very satisfactory to attempt to push very far the making of fundamental theoretical distinctions in terms of comparisons between institutionalists and equilibrium or model analysis. Not many of the basic questions fall into proper categories in that way. On the issues of valuation, for example, Commons' work is completely consistent with Knight's views in the areas of individual choice; but Commons' creative work in valuation was centered on the social valuation problem in terms of reasonable value. Veblen's formulation, on the other hand, in the area of individual behavior is almost diametrically opposed to both of them. Commons' view, again, can be contrasted with those of the more classical persuasion in his method of focusing the analysis upon the accessible alternatives for solution in a situation which centers on the means of reaching objectives. The best practice among model theorists of the classical persuasion is to separate strictly the means from the ends; and to hold the ideal pure even if unattainable. On the other hand, Veblen's thinking has a strongly positivistic bias—a line of thought which holds approximately to the view that nothing significant can be said about value and valuation except as they may be observed like other natural phenomena. On the question of the nature of fact, economists of all opinions seem to me to be all over the lot, philosophically speaking. The basic question here in the practice of economists evidently turns on the extent of use of mathematics. Although the mechanical postulate of mathematical and equilibrium analysis has the effect of recognizing only the mechanical aspects of our economy as fact, neither the sheep nor the goats in a separation along such lines can be classified as either institutional or noninstitutional analysts.

If I were to try to sort out one single issue that seems to me to really divide economists whom we call institutionalists (Commons, Veblen, Mitchell, Hamilton, J. M. Clark, for example) from the classical or mechanical school, it would be, I think, that the former are inclined to let the nature of the problem define their field of activity, whereas the more traditional or academic-minded are inclined to give the concept of "economy" or economizing a very definite meaning and allow the implications of the definition to define the field. But even this does not take us very far because in the last analysis we all use scientific inquiry to bolster up our common-sense judgments on even the great issues. If you take the narrower view of economics, you either conclude that economists should not formulate a judgment on any practical issue or you conclude that economists must know a great deal more than economics. However, if one takes the inclusive view the only way in which economics can avoid becoming synonymous with social science is to have a conception of economics which actually formulates issues so that they can be joined with the sister social sciences. The institutionalists in practice have sinned a bit on the side of a sprawling analysis, but their sense of direction has been right in giving their work an orientation toward social valuation and social organization.

I should like in the remaining allotted time to sharpen up an issue which I felt Professor Harris slipped over a bit too easily. He has given us a very careful exposition of the structure of Veblen's viewpoint—very largely in Veblen's own terms. But in the context of this discussion, more light would have been shed on the issues worrying Professor Copeland if Professor Harris had discussed critically the fateful distinction made by Veblen between what he called "sufficient reason" and "efficient cause."

Veblen elected to emphasize the importance of efficient cause as a part of his genetic account of phenomena. On the positive side, this basic conception did permit and implement the analysis of economic and social processes. The psychology which Veblen built into his work was accepted by Professor Harris, if I understood him correctly, as being in line with currently accepted theories of psychology. Also—and this is the constructive point I prefer to underscore—Veblen's process approach was consistent with the insight that social phenomenon can be understood only in the historical context.

The price which Veblen's analysis paid for this acceptance of "sufficient cause" was the virtual rejection of "sufficient reason." This rejection not only completely divorced Veblen's analysis from the classical doctrine of valuation, it also led to the virtual ignoring of the constructive function of the entrepreneur, as Professor Harris has pointed out, and indeed of the area of rational conduct by which advantage is taken of even the narrow possibilities of creative choices.

Now the problem before us seems to me to be one of how we can combine the insights of the static equilibrium analysis of the firm, as well as the aggregative analysis, with the insight made possible by process analysis, including the Veblenian approach. Somehow we must find a way to produce the future counterpart of *Risk, Uncertainty and Profit*, *Legal Foundations of Capitalism*, and *Imperial Germany and the Industrial Revolution*—all within one inclusive theoretical frame of reference.

EXECUTIVE DECISIONS AT THE TOP LEVEL

INTRODUCTORY REMARKS

By LEVERETT LYON, *Chairman*

We are here to listen to a discussion of executive decisions at the top level. This phrase, "executive decisions," is not a phrase of the traditional literature of economists. A quick survey of the indices of half a dozen of the texts most extensively in use during the past half century does not disclose the word executive. It is possible that this indicates only a lag in language. It is possible that it indicates a lag in the concept of management.

However, of the importance of management economists have always been aware. "Writers on social science," says Alfred Marshall (who, may I interrupt here to say to the businessmen in this audience, is the author of a sort of *New Testament* for economists—an author on whom most of the disciples in the economics profession have drawn heavily for the past sixty years), "from the time of Plato downwards have delighted to dwell on the increased efficiency which labour derives from organization." And organization calls for management.

Economic literature, however, in dealing with the management concept, seems to have adhered pretty closely to the good old term, "the entrepreneur." In any event, the masters of this trade—I mean the economics profession—at least during the period when some of us were maturing, have not deviated far from the ideas set out by Alfred Marshall, who wrote thus of the businessman: "But in the greater part of the business of the modern world the task of so directing production that a given effort may be most effective in supplying human wants has to be broken up and given into the hands of a specialized body of employers, or to use a more general term, of business men. They adventure or undertake its risks; they bring together the capital and the labour required for the work; they arrange or engineer its general plan, and superintend its minor details." "Looking at business men from one point of view," says Marshall, "we may regard them as a highly skilled industrial grade, from another, as middlemen intervening between the manual worker and the consumer."

This task of management has been spelled out with great finesse by many economists and in language which those who do most of the business managing for the country might not always understand.

The concepts of marginal productivity, with charts to match, may or may not be a part of the intellectual equipment of today's speakers. Each is, however, equipped with a record of unusual experience and effectiveness in management and in the making of executive decisions at the top level.

Our first speaker is a lawyer and a business executive. He graduated from Illinois College, became a student at Harvard Law School, and then transferred to the Law School at the University of Chicago, by which he was given a J.D. in 1919. He practiced law for a number of years; then became a special attorney for the Bureau of Internal Revenue; was then a member of the U. S. Board of Tax Appeals. He joined the Law Department of International Harvester in 1929 and is now vice-president and general counsel of that outstanding company. If it would not be regarded as a chamber of commerce utterance, I would conclude by informing you that he is a revered member of the Board of Directors of the Chicago Association of Commerce and Industry. Mr. Siefkin's subject, as you know, is "Executive Decision at the Top Level." He will treat it in any way in which his executive decision may have guided him.

Our second speaker, Senator Ralph Flanders, began to prepare for this address in 1880, when he was born at Barnett, Vermont. He supplemented this initial step with graduation from high school and work with the International Correspondence Schools. Dartmouth, Stephens Institute, Middlebury College, the Polytechnical Institute of Vermont and Northwestern University are only some of those educational institutions which, with honorary degrees, have recognized the effectiveness of his training and his achievements in using it.

Senator Flanders added to his preparation for today's activities by becoming a machinist's apprentice and draftsman and advancing to the presidency of the Jones & Lamson Machine Company and the presidency of the Federal Reserve Bank of Boston, as well as the presidency of a number of other business organizations. He has been a member of numerous governmental agencies, including the notorious NRA. He has been president of the New England Council of the American Society of Mechanical Engineers, of the National Machine Tool Builders, climaxing these accomplishments with membership in the American Economic Association. He is author of technical and economic books and of one with the intriguing title, *Taming Our Machines*. His final preparation for today's work came with his election to the United States Senate from the state of Vermont. In this capacity he has been called upon to make, in government, decisions more far-reaching in their significance than even those he made in his business career. Whether Senator Flanders will speak on executive decisions at the top level as they are made in business or as they are made in government, I do not know. It is possible that he will do both and possibly simultaneously.

In view of the fact that Senator Flanders' arrival in Chicago has been delayed by the storm, his paper will be read by Simeon E. Leland, Dean of the College of Liberal Arts of Northwestern University.

EXECUTIVE DECISIONS AT THE TOP LEVEL

By Forest D. Siefkin
International Harvester Company

I. *Introduction*

We Americans are great people for self-examination. It is usually said that baseball is our national sport, but I believe a good case could be made that soul searching is at least a close second and may have taken the lead.

At the end of a big laundry and a session with the hot stove, the tired housewife settles down with a gripping little article entitled, "Are *You* Blighting your Child's Life?" The junior clerk measures himself against the factors set forth in an essay called, "The Ten Hallmarks of a Successful Executive." And the executive, at home of a winter's evening, broods over a volume on "The Nine Bad Shots in Golf."

Because of this faculty for self-examination, we have developed an enormous, descriptive, and critical literature about almost every phase of American life. And of all these, the literature of business is among the most voluminous.

It is a solemn and chastening experience for any business executive to visit the second floor of a book store—up where the business books are usually kept. There he can wander for hours among texts on budgetary control, on corporation finance, industrial and public relations, product design, manufacturing, advertising, sales organization, taxation, industrial relations, accounting, and so on and on. Try it some time. And then pause to consider that as a business executive you are supposed to have at least a smattering of all these subjects.

So I will not attempt today to describe the functions of an executive. Any of the books will tell you that the management of a business involves the management of men, money, machines, and materials. Any of the books will tell you that the executive has three functions: to plan, to organize, and to control. Any of them will give you a quick résumé of the more commonly used methods for doing those things.

II. *The Executive's Habitat*

Instead, I should like to use my time for a quick examination of the changes that have taken place and are still going on—changes in the political and economic climates which compose the executive's natural habitat, and changes in the nature and style of the senior executive himself.

As to the first of these, our ordinary speech gives us an instant clue to the nature of the changes. We used to speak of major pioneer businessmen as "empire builders." The heads of large corporations were often known as "captains of industry." The meaning was plain—that such men exercised almost unlimited power within their scopes.

To a large degree that was true. Fifty years ago, the top executives of a major business were relatively as free as a longhorn steer on the unfenced range. The only superior power before whom all of them had to kneel was the choice of the customer—a power, incidentally, in spite of the efforts of advertising, which the customer still exercises freely.

Today the top executive of a business finds himself restricted in a progressively smaller corral. The posts, the barbed wire, the boards, and the brush of this corral consist of relatively new legislation. Such acts as those involving social security, fair labor standards, labor relations, and the registration and sale of securities, to mention only a few, involve the widespread practice of government by administrative law through boards and commissions. Along with these laws has come the concept of the "national emergency," which, in turn, gives great impetus to the unpredictable executive order. The same intervening years have brought taxation at such levels and of so many kinds as to make the government, from a revenue standpoint, the most important beneficiary of business operations. At the same time, taxation has become so important to the businessman that the impact of taxation forces him to consider it in many decisions to which no one formerly thought it could apply.

I should like to illustrate this change of environment more specifically in several important fields of business administration.

The first example is in the field of financing a company. Fifty years ago the XYZ Corporation found itself in need of greater capital to carry out its plans. Its executives then faced a choice from among several alternatives. They could borrow for the short term. They could borrow for the longer term. They could issue additional shares and offer them on the market. Or, if they had been prospering, they could add to their capital by reinvestment of past earnings, thereby increasing production and employment.

Today what do we see? Borrowing is still possible, in most cases. Issuance of new shares is totally impracticable in a large number of cases. The elaborate processes of the Securities and Exchange Commission have made the expense prohibitive or the timing difficult or impossible in the case of many corporations. The rate of income taxation has made the shares less desirable in all cases. So most added capital has come from retained earnings. And this source, too, is threatened by so-called "excess profits" taxes and by the recurring schemes for taxation of undistributed profits.

My second example is in the field of labor relations. Twenty years ago, if a company produced pig iron in a small Ohio town and had a union, the company and the union by more or less amicable processes arrived at an agreement on wage rates. They were locally negotiated and they fitted local conditions and needs.

That was before the creation of the War Labor Board. We are indebted to the War Labor Board for the invention of so-called "national patterns" of wages, and the enforcement of them nationally with all the power of the federal government. The Board is dead, but its deed lives after it. As a consequence, today we have a situation where the little two-stack steel mill is confronted by an enormous international union, waving a wage scale which it has just wrung from a very large steel company, and demanding acceptance "or else," on the grounds that it constitutes a national pattern for all steel mills.

My last example is in the field of the market. No matter how it comes about, when the customer's right of choice is restricted, managerial decisions are also restricted. If supplies of certain civilian goods in wartime or defense time do not meet civilian demand, or if government policies such as credit restrictions narrow the market and exclude many persons who would otherwise buy, the point may be reached at which no managerial decisions as to sales are necessary, except to determine how to keep salesmen alive until they are again needed. Recent years have also brought managed currencies and restrictions of all sorts on the flow of international trade; so that freedom of decision in such matters is greatly restricted.

These examples could be multiplied by reference to other fields, but these are sufficient to illustrate my first point. It is that the business executive has had his areas of decision restricted, both by direct and indirect effects of actions of the government. Some say this was necessary for the protection of the public or competitors against the horns. Some say it is preliminary to the final slaughter of the animal. However that may be, I do not speak of these bygone days with nostalgia or regret. That was a different world. It might have been a better one. It may have been a worse one, depending on your point of view. But one thing is certain: the changes have been many and radical.

A second impressive factor in the modern executive's surroundings is exhortation. Oddly enough, along with these restrictions on his action, the executive finds himself subject to more exhortation than ever before. He is told that his production is too low, his prices too high, his profits too big, his taxes too small, his labor policies benighted. At the same time he is told that it is up to him—acting for industry—to provide prosperity for other nations, equip the armies of half the globe, and create and maintain ever increasing employment. He is frequently summoned to Washington to be told that satisfactory achievement of some new ideal is "industry's responsibility."

It reminds one of the scene in the old melodrama where, after the villain has kicked the heroine, dispossessed her parents, kidnapped her fiancé, and tied her in front of the buzz saw, he leans over her and whispers: "Nellie—why don't you trust me?"

A third factor in his milieu is that the executive is confronted as never before with political uncertainties. Uncertainties are normal in his life. If there were no uncertainties there would be no need for executives. He has always had to confront and deal with the uncertainties of economic forces and of technical progress.

But, in addition, he faces the uncertainties of government control over industry and business. Will the government allow steel for the production of civilian widgets and, if so, how much? Dare he start construction of a new plant or will he find that, half way through, the government has pre-empted all powerhouse equipment? If his wages are tied to the Bureau of Labor Statistics cost-of-living index, as many wages now are, he knows the Bureau is re-examining the basis of its index. Will the eventual result be a proper index or will it be heavily weighted to bring about wage increases? If he faces a heavy investment in machine tools, what provision should he make for their future replacement, in view of the depreciation of the dollar? Will there be a check on the dilution of the dollar or will it increase or continue at the same rate?

This is a group of new problems, not so much business or economic problems, such as he has been trained to meet, as they are political problems involving political prophecy.

My fourth factor composing the new "executive's natural habitat" is that he is increasingly surrounded by legalistic, economic, and technological problems which he cannot possibly comprehend except with the aid of experts (and perhaps not then) but with which he must deal in the over-all decisions of business. Fortunately in making those decisions he may have at his call specialists such as market analysts and sales engineers, credit men and labor relations men, research metallurgists and traffic experts, accountants and statisticians, product engineers, process engineers, time study engineers, psychologists, economists, and what not. His problem is to see that they are so assigned that all of their special knowledges and skills are brought to bear on the kind of problems on which he needs help. Some of these specialists will be assigned to short-range projects aimed at the solution of an immediate problem. Others, as in engineering research, will be employed to see that the business is kept abreast of trends and that long-range mistakes are avoided as far as possible. The top executive does two things with the information which he asks from these specialists (or which they offer to him to keep him advised): (1) he synthesizes all of such information in arriving at his decisions; (2) he may resolve disagreements between the experts.

Thus, the executive's problem is to know how to direct the experts at work which should bring him answers on questions which he has raised and on which he has made assignments for long or short duration, because he needs the answers as parts of the solution to problems which he sees or foresees.

III. *When the Experts Fail*

What does the top executive do then when the experts fail? You know what he does. He does what he is paid for: takes his own guess based on his own experience and judgment and awaits the consequences. If he is right oftener than his competitors, he is a success. If he is right a lot more, he is a business genius.

For with all the books and all the charts and all the expert counsel, the top-level administration of a business—fifty years ago or now—always requires two things: the willingness to take responsibility for a decision and the ability to make correct decisions most of the time. Sometimes problems can be studied at leisure. Very often, the executive has to shoot from the hip. In either case, the good executive's success is measured by how good his judgment turns out to be, based on all the facts and expert advice at his command.

All species undergo changes with changed environment. Times change and men change. The senior executive of today finds himself devoting to labor relations and public relations and political economy much of the time which his predecessors gave to finance and production. That is true because those are the newer problems, the more pressing problems, the ones where the experts are least expert and the disagreements most frequent. Tomorrow? Who can tell? We only know it will be different.

HOW ARE TOP EXECUTIVE DECISIONS MADE?

By Ralph E. Flanders
United States Senate

Just how many of the annual sessions of the American Economic Association I have attended I cannot remember, but there is quite a goodly number to my credit both before and since I became a member. If I am not mistaken, I have attended some of them in which I was not invited to participate. I sincerely hope that I can establish my qualifications on some other basis than that of being a luncheon or dinner guest.

Mr. Siefkin sent me copy of his delightful talk in advance of the time I was able to write my own. Besides the pleasure of reading it, this courtesy has the further advantage of enabling me to select an area of exposition and discussion which covers other matters than those with which he deals so effectively. Mr. Siefkin has told in some detail the changes in the task which the top executive finds laid out for him to perform. He explains how the decisions the executive has to make are narrowed largely by governmental controls, but are at the same time deepened to a point where no single man's experience and judment can comprehend all the factors involved. Top business decisions have to be passed on by an army of experts each specializing in some field of competence. Yet at the same time, as he shows, the final decisions usually have to be made by the top executive as always.

I am addressing myself to another aspect of executive function. This paper undertakes to examine the motives and the moving principles which determine the decisions. This relates to the time after the executive has available the information provided by his assistants and their experts during which the final conclusion must be made.

What moves the executive in making these final decisions? There is a good deal of misapprehension and folklore as to what guides business decisions. In the category of folklore I would put the celebrated thesis of Thorstein Veblen: that the moving decisions are those which serve "conspicuous waste." That was indeed a picturesque thesis, which has fascinated readers, particularly young readers, in the well-nigh two generations which have passed since it was first published. Veblen lived in the decadent and dying days of Fifth Avenue and Newport Society. There he witnessed the lavish and public expenditure of wealth in magnificent houses; liveried coachmen, footmen, and lackeys; and extravagant entertainment in the Fifth Avenue homes and the houses on the Cliff Walk at Newport. With his eye focused on all of this, he came easily to the conclusion that the womenfolk of American business, with their insatiable demands for houses, dress, jewels, and social display, were keeping the American business nose to the grindstone of dollar production so that "conspicuous waste" could be maintained, continued, and, if possible, expanded.

As was just said, what he saw was the last colorful display of a dying social phenomenon. In the first place, the husbands of these wives were not typical businessmen, even of their times. They were real estate owners, stock market speculators, and parasites on a productive society. If one were looking for productive effort, it would be far better to observe the family life and social customs of John D. Rockefeller, who was engaged in building up his oil empire and his organization for production and distribution, or that of Jim Hill, builder of the Great Northern Railroad, whose operations, sometimes dubious, always spectacular, added greatly to the expansion of American agriculture and truly gave warrant to his title of "Empire Builder."

Perhaps, too, Mr. Veblen might have looked at another railroad builder, Mr. E. H. Harriman, with whom in his later years Mr. Hill was locked in deadly struggle. That great mansion on a mountain top near the New York-New Jersey line which Mr. Harriman built for himself might seem to be an example of "conspicuous waste." Yet he probably thought of it simply as befitting his station and achievements; for neither he nor his wife belonged to the tribe of wasters. They were united in a life-long experience of building.

Veblen's doctrine of conspicuous waste was a picturesque statement of the commonly held idea that the desire for money is what drives the businessman on towards such success as his opportunities and capacities bring to him. There is of course truth in this popular idea. What truth there is in it is attested to by the fact that men who are in the upper brackets of income are no longer as ambitious and ingenious as they used to be in expanding their income by risking their available funds in new undertakings. Owing to the drastic nature of our tax laws, many of them willingly see the earnings of the companies in which they are interested reinvested instead of coming into their own hands as expendable wealth. Expendable wealth is subject to double taxation; reinvested wealth is taxed but once. Similarly, in place of risk investment, our tax laws place a premium on tax-free government bonds. Small though their return may be—and that smallness is a test of the demand for them—the money income they can derive from them is greater than is available from most cases where old-fashioned enterprise and initiative would have had high rewards. So it is clear that money income is a consideration. By destroying the possibility of achieving satisfactory new income by enterprise and initiative, we are destroying those valuable elements in our American heritage.

The ability to make money is an essential element in business success for other reasons than the personal aggrandizement of the management or the stockholders. The business which does not make money is a socially sick business. It is unable to furnish proper income or reasonable security of employment to its employees. It is unable to offer a reasonable prospect of expansion to meet the needs of a growing country and a rising standard of living. Financial failure is a social liability; financial success can be and usually is a social asset.

Since the appetite for money is now so limited in its satisfactions, what is it that continues to drive the businessman? May it not be a desire for power? If a man by good fortune, ability, and experience finds himself able to control the lives and destinies of more and more men both singly and in business organizations, may not that account for the devotion to business of men for whom it has not become impossible to acquire incomes equal to those of the older generations? Certainly a liking for power and a satisfaction in its exercise is a human trait which has been recognized since the beginning of history and is surmised from the remains of ancient races that have come down from the times before history was written. I am sure we will have to credit this desire for power as one of the continuing drives which determine the business decisions of the capable and experienced executive.

There is, however, a first-degree sublimation of this desire for power which has more humane aspects and connotations. This is the desire which every man of ability has for an arena in which he can exercise his ability and experience to their utmost limit. There is nothing more discouraging to a man than to feel he has unused powers. This discouragement comes equally to the man who only imagines his capacities and to the man who knows them. One of the most dangerous elements in an organization or in society as a whole is that of the man or group of men who imagine themselves to be possessed of abilities which they are not gifted with. When by chance or misapprehension such a one rises high in the hierarchy of a business organization, the result is disastrous. The opposite is true when the man of ability seeks a suitable field for its exercise. Such a man is worth much, not merely to himself, but to those associated with him and to others below whose destinies he determines.

Such a man should have an honest and laudable pride in his business performance. That pride is the more laudable if it attaches to the performance of a useful social function. Such men and such businesses are rightly entitled to a part of the monetary value of the services which they render.

We have then considered conspicuous waste, an appetite for money income, a desire for power or for the exercise of talents, and pride in social performance as being among the motives which drive businessmen towards the business decisions which they make. Most of these are present in some degree in the background of every business decision, though in these days conspicuous waste is the least obvious of any of them. Let us now continue with some of the detailed considerations which animate the businessman at a level below that of primary motivation. Some of these considerations relate to customer relationships and some to relations with suppliers and with competitors.

There has been in this country a steady growth of consideration for the interests of the customer, which fits in with consideration of ethics but which has been based on sound business considerations nevertheless. Perhaps the first important exhibit of this consideration for the customer took place many years ago when John Wanamaker started the practice of marking the price clearly on all the goods in his store. This did away with dickering between customer and salesman, with the thought still sticking in the mind of the salesman that perhaps he might have gotten more and with the customer that perhaps he might have paid less. Customer satisfaction soon showed in a preference for dealing at Wanamakers, and this preference animated a general movement towards plain and definite pricing which in our day has become legally recognized in such laws as the Robinson-Patman Act. Customer protection has become good business and good law.

Business decisions reach further than this into what at first sight might seem to be purely ethical motives. For instance, as compared with the early days of the Standard Oil Company, many a dominant firm in a large industry now hesitates to drive a competitor to the wall even in the perfectly legal ways of contenting itself with lower prices and lower profits. More than one great business organization "holds an umbrella" over less efficient producers and distributors. This is done, at its lowest estimation, through fear of government prosecution under the antitrust laws. On a higher level of motive, it is done with the conviction that healthy competition is good for any business—a sentiment akin to Josh Billings' dictum that a certain amount of fleas is good for a dog.

In these respects the atmosphere of American business differs so fundamentally from that of Great Britain and Western Europe that businessmen of the two continents scarcely speak the same language when they are discussing the subject of competition.

There is still a third relationship in which good business judgment takes on the aspect of ethical conduct. Besides relations with customers and competitors, there are certain relations with suppliers which should be mentioned. It is not so many years ago that those who supplied certain of our great corporations used to reckon that if they were successful in obtaining a large order, the chances were that they had miscalculated the costs of production and were therefore headed towards heavy losses and perhaps banruptcy. This was particularly true of one of the great automobile companies of a past generation. Wiser and more long-sighted business practices are leading towards a different point of view. In some lines of production each great corporation is surrounded by a multitude of suppliers serving both customers and competitors as well. It is more and more generally considered that for the long run a successful supplier offering high quality goods at a reasonable price should be permitted to survive. It is best not to destroy him. This sounds sensible enough as we say it, but yet it is a fact that only in comparatively recent years has this point of view become effective in the making of business decisions.

Earlier reference was made to a sort of succession in the possible motives which guide executive decisions. Beginning with conspicuous waste, appetite for money, desire for power and for a chance to exercise abilities, and finally in pride in performance of useful social functions, we see a steadily rising level of what appears to be a purely ethical content. There certainly is an ethical content, but I would like to suggest the idea that this is a series in which sound business wisdom and judgment increase also.

This leads to the final consideration which I wish to offer, which is that long-range self-interest and valid ethical impulse are not surely competitive. They are more probably identical.

ECONOMIC THEORY, STATISTICS, AND ECONOMIC PRACTICE

DECISION MAKING AT THE TOP EXECUTIVE LEVEL

By Henry S. Dennison
Dennison Manufacturing Company

In order that we may have a common point of departure, I shall first give a brief outline of the nature of the Dennison business. For, of course, the nature of the business—its products, its markets, its men and women, and its traditions—vitally affects most decisions made by its top executives.

Our business made its start in Brunswick, Maine, in 1844. In that year, Colonel Andrew Dennison, a hand shoemaker, hard pressed by the new machine-made shoe industry, turned his skill to making paper boxes for his oldest son, a jeweler and watchmaker in Boston. To the jewelry box as stock in trade, a second son, Eliphalet, added, from time to time, in the Yankee tradition, tags, labels, and tissue paper together with a host of notions. From these items—a compound of necessities and specialties—have evolved our six product lines: paper boxes; tags and labels; gummed paper; crepe paper; holiday gift dressings; and automatic marking machines. These six product lines fall into two classes: items for resale, handled by wholesalers and retailers; and items for direct use by the industrial purchaser.

Our principal manufacturing plant is at Framingham, Massachusetts, while box manufacture is carried on at nearby Marlboro. Branch plants are operated at Drummondville, Canada, London, England, and Chicago, Illinois. Marketing operations for the United States are carried on through five sales areas. Four retail stores—two in New York and one each in Chicago and Boston—serve as market testing outlets and as essential aids to our publicity work. One subsidiary carries on our business in Canada while a second covers other foreign markets, except Great Britain and certain areas of the British Commonwealth, where a controlled subsidiary operates.

Our incoming orders for this year will approximate $32,000,000. The number of employees in the United States is 3,700, and the total for all companies 4,200.

The business has a net capital of some $14,000,000. This investment has developed entirely from reinvested earnings. We have three classes of securities: a debenture stock, which has reserved voting powers which enable its holders to take over the business under certain conditions; an "A" common stock which has reserved voting powers only; and a voting common stock which is owned only by about two hundred of the active managers of the Company and which has all ordinary voting powers including the annual election of directors. The idea that control of the Company should be in the hands of its active management group is as old as the business itself.

From a structural standpoint the Company operates through four main divisions: manufacturing, marketing, financial, and research. Together with the president, the heads of the four divisions and three of their principal assistants constitute the board of directors. These eight men acting as operating heads and as the board of directors make all basic decisions on the policies of the Company.

From our struggles in the market place during the past hundred and six years, certain time-tested patterns for the guidance of decision have evolved. First and foremost we direct our course towards the goal of a sustained growth which shall keep pace with that of the nation. In other words, our every decision must square with the thought that we are in business, not for the short pull, but for the long pull. We have a tradition of sound workmanship in our product which stems directly from the shoemaker's bench. And from the same source we have the concept that employees are human beings, not cogs in a machine. Since 1911 we have had the specific provision that our managerial group beginning with foremen and senior salesmen shall elect the directors and shall thus participate in holding the Company on its course. Long-established relations with thousands of wholesalers and dealers upon whom we must depend to market our resale merchandise and our direct contacts with thousands of industrial consumers compel a careful regard for the interests of the buyer. Evolution constantly going on in the fields of our raw materials—papers, adhesives, plastics, solvents, metals—dictates likewise a co-operative attitude towards suppliers. As our debenture stock and "A" common stock are very largely in the hands of the investing public, we must respect its interest also in shaping financial policy.

In sum, the central concept of sustained growth and such ideals as dependable merchandise, man-to-man relations with our employees, election of directors by the managerial group, mutual interests with customers and suppliers, and fair return to investors have come to form the pattern or frame of reference within which decisions are made.

As for actual decision making, we hold it to be self-evident that prudent decisions for a long-established, steady running business will be in the main the result of foresighted planning and not of the hasty judgment taken on impulse. Of course, no amount of planning can anticipate the need for quick decision when required by disaster, international incident, or invention. But even in such emergencies our decision makers must have at hand a full kit of standard tools which may be supplemented by such as may be required by time and circumstance.

Before we turn to concrete examples of decision making, I should like to speak briefly of the background of the men actually responsible for top-level decisions; that is, our board of directors. As I have said, control of the business has always rested with its managers. Directors, with a single exception, have been elected to the board only after an extended period of service which has enabled them to demonstrate imagination and judgment and to become fully acquainted with the Company's traditional or, one might almost say, constitutional policies. Actual length of service of present board members with the Company runs from seven to my fifty-one years, with an average of twenty-nine years.

I hardly need to tell you that as decision makers we are constantly provided with up-to-the-minute data concerning sales, costs, earnings, and cash position; and that we have available the specialized services of our own staff assistants as well as those of the Research Division. Insofar as possible, Dennison information is supplemented by data bearing upon the course of business in general and upon the activities of competitors in particular.

But our directors can go beyond personal experience and current data in forming a decision. We look upon the Dennison Manufacturing Company as an organism which will long outlive the individual. In 1920 we therefore undertook the preparation of an intimate history of our many business experiences. Over the past thirty years the evolution of our manufacturing, merchandising, selling, publicity, research, financial, and personnel policies has been traced. Factors which have contributed to the success or to the failure of individual policies have been made a matter of definite and critical record. It is not an overstatement to say that our history serves as our elder statesman.

Yet a board of directors like ours faces the constant danger of becoming parochial in viewpoint if it relies too much upon what we might call homemade tools of decision. As a general measure of precaution we see to it that our top executives have extensive and varied associations outside the business; and on specific problems where expert knowledge or counsel is required we call upon the services of engineering and financial organizations qualified to audit or to guide our own thinking. And there is still another antidote to parochial thinking, not exactly of our own choosing; namely, the spirit and drive of our competitors in every field.

Every problem for decision, regardless of its origin, has its necessary time factor; that is, either decision must be immediate or it may be postponed for a short or a long interval. As I have already pointed out, it is our purpose to avoid the need for great speed in decision making by advance planning. But in a dynamic economy there will always be some emergencies which will demand less well-prepared handling.

To illustrate the process of decision making, I shall describe four problems. In the first of these the emergency factor was dominant.

As I have said we have retail stores in New York, in Boston, and in Chicago. The primary purpose of these stores is not to serve as outlets for Dennison merchandise but as points of contact with the public. Through these stores we obtain firsthand reactions to our merchandise. Since we realize that it is quite possible to get equally valuable reactions through our dealers, it has been our policy for many years not to expand our own retail operations. But in a specialty business a policy is a guide, not a shackle.

In mid-August, 1948, the manager of our New York regional sales force called upon the rental agent of Rockefeller Center in quest of space. The rental agent had no office space available; but he did offer a store location which would afford us an exceptional opportunity to display our merchandise. The regional manager immediately advised our New York store manager. Within a week the latter was in Framingham to urge rental before the space was "snapped up." The directors, in view of our policy against expansion of retailing, were skeptical; but nonetheless appointed a committee to view the location and report. The committee and, through it, the directors quickly became "converts" to the unique possibilities of the location in Rockefeller Center—the hub of New York and of the traveling public. And, in a real sense, the new store would be but a branch of our already established New York store. On September 8, scarcely three weeks after the chance was suddenly offered, the directors approved the signing of the lease.

My second illustration of decision making concerns a continuing problem which suddenly became "hot."

Previous to 1931, our salesmen were paid on a straight salary basis. Individual gains in sales and growth in personal effectiveness were recognized by increases in salary. Further, from 1911, principal salesmen of five years' service became "managerial partners" and as such shared in profits which were distributed each year through 1929.

From time to time, the directors compared the merits of salary payment with those of commission and other plans offering perhaps greater immediate incentive to increasing sales. On each occasion it was concluded that salary was the method best suited to the Dennison business with its diversity of lines and of sales outlets.

Among the principal reasons weighting the directors' judgment were that salary avoided the evils of overselling and of high-spot selling; that salary facilitated the directing of salesmen's efforts into promotional and service channels where immediate sales returns were not the primary goal; and, perhaps most important, that salary developed a strong sense of loyalty to the Company and its policies.

After more than a decade of a seemingly endless sellers' market, it is now difficult for us to visualize, or even to recall, the grim days of mid-1931 when the sales curve, having already pierced the level of our most pessimistic estimates, continued its relentless downward course. Casting about for measures to stem the grinding loss in sales, the directors then once more reviewed the possibilities of incentive payment for salesmen. We quickly agreed that the validity of arguments against incentive payment in normal times had lost much of their weight. For example, the danger of overselling was as dead as the Great Bull Market. But then, having agreed as to the desirability of a special incentive to sales effort, we had to decide upon the kind of incentive to be used; that is: Should straight commission on sales volume be used? Should there be a combination of salary with a bonus figured on sales above a given base? Should there be a combination of salary with a bonus paid for cetrain specific kinds of sales?

Recognizing that the straight commission method of payment often left a man unrewarded for a maximum effort and not having time to develop a carefully wrought plan, we decided that as a temporary measure, for the last six months of 1931, salary would be combined with a bonus paid for exceeding immediate past performance.

Because of conditions beyond the powers of any sales plan, the particular plan chosen did not produce the desired gain in sales. Consequently, for the first nine months of 1932, we returned to straight salary. Sales management, however, was still convinced that the times required special incentives. Accordingly, in the autumn of 1932 the directors agreed to try out a modified plan of payment combining salary with a bonus for special accomplishment. And although the plan developed shortcomings and was in consequence revised from time to time to increase its effectiveness, we continued to use incentive payment for salesmen.

Following the war, we expanded our sales force by some 50 per cent. This rapid expansion and the uncertainties of the postwar boom literally raised hob with the factors upon which bonus payments were based. Frequent adjustments in individual sales territories were necessary; and there were important shifts in the volume of demand among our lines. Then, too, there was the developing desire among the salesmen for security of income. By the autumn of 1948 the administration of the incentive method of pay had become so complex that the directors decided to cut the Gordian knot and return to straight salary payment as of January 1, 1949. Under prevailing conditions straight salary payment gives us a flexibility of control which offsets the advantages of incentive payment.

The issue, however, is by no means closed; and as conditions change we may again find it desirable to go back to some form of incentive payment.

I shall turn now to the type of problem for decision in which the factors have been building up for a more or less extended period and upon which decision may be postponed perhaps indefinitely.

A recapitalization plan effected in 1939 not only simplified our capital structure but also reduced in some measure our fixed dividend charges which had proved too heavy during the depression. As these charges were still considered high when measured against well-accepted financial standards, the directors were agreed that at the first favorable opportunity we should take further steps to reduce them. In the autumn of 1940 such a favorable opportunity seemed at hand. The pace of business was accelerating. Money rates were low. Our debenture and prior preferred stocks not only were selling at low prices which seemed to overdiscount risk factors but their markets also were very inactive.

Over a number of months members of our financial staff prepared alternative plans for action, ranging from exchanges of securities to offers for outright purchase. In developing these plans, professional investment counselors were consulted; and banks and insurance companies were approached as possible sources of funds. In coming to decision the directors had to anticipate the reaction of stockholders and to project the effects upon the Company's financial requirements. We had to put to ourselves such specific questions as: Would the debenture stockholder exchange his 8 per cent debenture stock for an easily marketable bond carrying a lower return? Would he prefer to sell his stock to the Company? Would he just sit tight? Would it be practical, or even desirable, to make an offer to the prior preferred stockholder who had just received new securities under the 1939 Recapitalization Plan? In light of market conditions, would it be wise for the Company to issue bonds or notes in spite of their limitations on financial flexibility?

In June, 1941, the directors at length decided to approve a plan under which tenders of debenture and prior preferred stocks would be invited up to $1,000,000—this sum to be made available by an insurance company as a fifteen-year loan. When actual tenders called for an expenditure of but $725,000, the directors promptly decided not to borrow the $1,000,000, but to make payment out of cash on hand and short-term borrowings. In June, 1942, with conditions still favorable for preferred stock purchase, the directors again decided to invite tenders, this time in the amount of $400,000 to be provided out of cash on hand. On this occasion our stock purchases approximated $300,000.

As a result of these two decisions to take advantage of favorable conditions in the money market, our fixed dividend charges were brought well within the limits of normally available earnings. Later, in March, 1946, the entire remaining prior preferred issue was called.

My final illustration of long-term decision making is drawn from our manufacturing experience. Since about 1900 our principal manufacturing activities have been concentrated at Framingham and Marlboro, Massachusetts. As previously stated, branch plants are operated in Canada and in England to meet national conditions, while a small tag plant meets service conditions in the Chicago area. As we operate on a nation-wide basis and as our made-to-order goods, which comprise roughly half our sales, have a delivery factor in their salability, there has been, particularly since the development of the buyers' market in the twenties, pressure of varying intensity for the establishment of a plant in the Midwest. The Chicago plant, established in 1928, was designed to measure the degree of actual need. During the depression of the thirties, this plant proved to be a useful factor in service, more perhaps from the psychological effect upon customers and salesmen than from the actual shortening of delivery time.

With the expansion of business occasioned by World War II and its aftermath, the problem of establishing a western plant received a marked impetus. New factors entered the situation, such as the need for additional manufacturing space either at Framingham or elsewhere and the entrance of a large manufacturer into the Framingham labor market.

In November, 1946, the directors decided that the total branch plant situation should be studied without delay by staff men who would report to a subcommittee of the board. Particular attention would be given to such general factors as location, kind of products to be manufactured, number and type of personnel needed and effect upon Framingham operations. In April, 1947, on the basis of data prepared, the directors decided to proceed immediately with the selection of an actual site in the Midwest with the idea that construction would not be undertaken for a year at least. In selecting the actual site, the subcommittee of directors had to weigh such specific factors as the nature of the local labor market, transportation facilities, utility and social services, and taxes. In October, 1948, the board decided that negotiations should be undertaken for the purchase of a site in Champaign-

Urbana, Illinois. By October, 1949, the site had been purchased and long-range plans for construction were under way. At the outbreak of the Korean War the decision to go ahead with construction was imminent. Developments arising from that war, however, immediately introduced a new set of factors into our thinking: If the plant were begun, could it be finished? If the plant could be finished, would it be wise, with costs of operation mounting rapidly, to draw upon our funds for construction as contemplated; or would it be wise to undertake long-term borrowing? Again, and perhaps most important, if the plant were finished and equipped, could we secure the proper kind of personnel in a generally tight labor market? And it is clear that if we started operations with a makeshift crew, personnel problems would develop which might take years to iron out.

With conditions as they are today the directors are agreed that construction of the Midwestern plant must be postponed until visibility definitely improves.

In the foregoing paragraphs I have sought to illustrate how our top executives by combining principles drawn from history, personal experience, and facts strive to reach decisions which will leave a minimum margin to chance. In conclusion, I should like to dwell briefly upon a phase of decision making which I have already touched upon; namely, acceptability. In making any decision, the decision makers must always anticipate its acceptance by individuals, be they employees, customers, suppliers, or the public. It is our belief that the more closely a decision derives from the facts of the situation the more readily it can be accepted. While, as must happen, time may prove a decision faulty, the propriety of that decision as based on fact and not on predilection will guarantee it against violence to internal or external good will.

ECONOMIC THEORY AND QUANTITATIVE RESEARCH: A BROAD INTERPRETATION OF THE MITCHELL POSITION

By RUTLEDGE VINING
University of Virginia

This discussion is to be in three parts. The first has to do with the essential purpose that seems to have given rise to the development of classical and neoclassical equilibrium price and production theory. The thesis that is presented in this part is that this theory has developed in the striving for a formulation of the attributes and behavior characteristics of a "good" or desirable system of economic organization. Viewed in this way, equilibrium theory has not as its primary purpose the description of actual economic behavior or development. It has principal reference to a formulation of criteria rather than to objective description and prediction, and yet the sense in which it is normative is to be critically qualified. The second part has to do with the elementary questions of fact regarding the actual performance of an economic system that are involved in social discussion. Criticism of the performance of an economic system implies criteria or standards, but it also involves factual statements in specifying the defects or virtues of the actual performance. The third part raises questions regarding the study of the behavior or operating characteristics of the actual economic system that are apart from any immediate and specific topic of social discussion—the search for any permanencies and uniformities in the structure and functioning of an economic system that may be brought to the level of consciousness as setting the conditions under which solutions of social problems are to be sought.

What I have to say under the heading of the first part is not from the writings of Mitchell, although, of course, it is not original with me. I have no reason to think, however, that Mitchell would not have accepted this interpretation of equilibrium theory as having only limited usefulness as a theory of the actual performance of an existing economic organization, but as being implicit in critical judgments of how well a system is functioning. I feel that this first part is appropriately included in the present discussion as providing a go-between for what I take to be the position of Mitchell, as a specialist in quantitative economics, and what I take to be the position of other men, as specialists in neoclassical economic theory, for whose insights and intellectual leadership I have the same high regard as I hold for those of Mitchell. Reading statements that have been made by such contributors to these respective fields, one may get the impression that public discussion of any economic problem—say, the farm problem—illustrates this. In specifying the aspects of the functioning of the actual economic system that are looked upon as defects, references are made, either explicitly or implicitly, to the structural and performance characteristics of some abstract model that defines the sense in which the actual performance is judged to be defective. In reviewing the various features of a particular reform measure, statements are framed in terms of how the reform measure may be supposed to render the actual workings of the system more in conformance with how it should work. It is in the discussion of the properties and characteristics of the working of an economic system that may be thought of as "working well" that neoclassical equilibrium price and production theory plays its peculiar role.

Social discussion seeks solutions to economic problems. A problem, in this context, consists of a conflict of interests among people who are free to agree or not regarding the terms of joint action. In the resolution of such problems, economic democracy presupposes the existence of true discussion as contrasted with debate and special-interest maneuvering. When men confront one another with incompatible beliefs and viewpoints, no meeting of minds is reached through a reiteration of beliefs and viewpoints. An open explanation of the basis upon which beliefs and viewpoints rest is required. Equilibrium price theory plays an essential role in social discussion seeking solutions to economic conflicts; but no solution is yielded by it, and it is not normative in the sense of providing within itself the solution. A solution is reached when the conflict is resolved, and this equilibrium theory is only an instrument used in the clarification of the issues as conceived in the minds of the contending parties.

The particular concepts of solution and of problem have quite special meanings in social science strictly considered. In seeking for a solution to an economic problem a certain kind of truth is sought. But it is a subtle kind and distinctly different from the truth sought in the natural sciences. It is subjective and its essence is moral rather than objective, positive, and empirically testable.

At a primitive level we have perhaps all experienced or taken part in the process of arriving at a solution and discovering a truth in the sense that these are used in the present formulation. All of us have seen some game among children deteriorate and temporarily break up as a result of a difference in the interpretation of rules or as a result of a developing feeling on the part of some that the present rules are not "good" ones. At best, the process by which such a conflict is resolved is an instance of social discussion. If one of us should go out to help in the solving of the problem, we would avoid any suspicion of coercion.

Authority would not work in keeping the game alive. Persuasion would be suspect from the beginning, and if the spirit of debate develops and maintains its sway the prospect for the continuation of the game is badly impaired. Discussion, as sharply contrasted with debate, would be the process to get under way: a proposal by one side and an "objective" review by both sides of its merits and its shortcomings; a counterproposal and another review. If something is asserted that seems not to be true, an agreement upon its truth or falsity is established. Gradually, there would take form an agreeable conception of the attributes of a good game, and when this is conceived there is a general feeling that the truth is about to be discovered. When finally the workably correct proposal is made, all parties are aware of a discovery of a truth, and it is known subjectively as a feeling of an amicable meeting of independent minds.

Ideal social discussion of mightier issues is no different in essence. The truth is known only subjectively within the minds making up the group, and it represents the difference between consensus and brooding conflict. To see the role that equilibrium economic theory may play, one may study, for example, the Congressional hearings on some controversial piece of legislation. The mere underlining of the concepts, terms, alleged relations, and the like that obviously are inadequately defined or that apparently involve logical or moral incompatibilities indicates the work of the economist in this role. To make explicit the basis for the apparent consensus that "something must be done for farmers" and to help men review in their minds and to make explicit the reasons they might think that Mr. Brannan's proposal is or is not a good way of altering the rules calls for a priori analysis; and if a neoclassical price theory did not already exist, something much like it would be generated in the process. Clarifying concepts and relations introduces new points to be discussed, and gradually there emerges, apart from any particular theoretical model, a formulation of the attributes and performance characteristics of a properly functioning economy. When this is achieved, the trail of the truth has been hit, and then comes the discussion of what might be taken to resolve the conflict among the parties to joint action. When consensus is reached, the truth, at the immediate level, has been discovered, and the process by which it is discovered is social discussion.

The failure to appreciate this subjective and moral character of truth in the social studies is, in the view presented here, a very troublesome stumbling block for one attempting to understand the meaning of economic theory. Truth as an end in itself is a value associated with the Enlightenment, and we have been taught the precepts of science as a moral code. But the distinction is generally or frequently neglected between the spirit and the method of science. This is a comment of one of our present members, and he goes on to observe that "the spirit of discussion is the essence of the scientific spirit, but the antithesis of the scientific method. . . . As a plain matter of fact, we do not discuss problems with natural objects, and we do, or may, with human beings. . . . Discussion is a co-operative quest of an impersonally 'objectively' right (or best) solution of an impersonal problem. It cannot be an attempt to 'sell' a solution already reached, or it is not discussion. . . . The utilitarian-pragmatic philosophy involves the fatal confusion of carrying the scientific method, rather than the spirit, into social relations."[2]

II

From the above point of view, economic theory of the traditional type has not as its principal objective the description or prediction of actual economic behavior.[3] But clearly, a description of the actual performance of the economic system is implicit in any discussion of the existence of defects in and of the ways and means of improving this actual performance. The formulation of the various aspects of good or ideal performance and the reliable description of the nature of the actual behavior deemed defective are preliminaries to a prescription for the cure of the defective performance.

An enterprise economy, the pricing process of which is described by the theory of value, has certain alleged hypothetical virtues—quantitative in nature and apart from the principal virtue of providing for the maintenance of mutuality in individual relations. There are also supposed to be certain major defects in the performance of such an economy. To the extent that there has functioned over a period of time an economic organization approximating an economy of this type, certain of the assertions of these virtues and defects may be framed as hypotheses and empirically tested.

As illustrations we may list a few statements of what have been at one time or another presented as good and as bad performance characteristics of the actual economic system. On the one hand, claims have been made that: (1) adjustment mechanisms inherent in the system make for relatively great efficiency in the use of resources within the economy; (2) progress in the form of a rising standard of living is relatively rapid; (3) from generation to generation there is relatively easy passage for families and individuals between income or social classes.

---

[2] *Ibid.*, pp. xxiii-xxiv.

[3] Cf. Professor Knight's comment: "A 'science' of human behavior, to be relevant or practically significant, must describe *ideal* and not actual behavior, if it is addressed to free human beings expected to change their own behavior voluntarily as a result of the knowledge imparted. . . . There is a sense in which a science of ideal behavior is incidentally 'explanatory' (to the extent that actual behavior is motivated by a desire to appropriate the 'ideal'). The fact that description of ideal behavior in part explains actual behavior operates as a source of confusion; the notion that economics is a science explanatory of actual behavior is the most important single confusion in the methodology of the science." F. H. Knight, "Economic Theory and Nationalism," in *The Ethics of Competition* (Harpers), p. 279.

On the other hand, allegations have been made to the effect that: (1) there is a cumulative tendency inherent in such an economic organization toward monopoly and overpowering aggregations of economic control; (2) there is a cumulative tendency toward greater inequality in the distribution of wealth and income; (3) there is a secular tendency toward developing underemployment of resources; (4) there is a tendency toward a succession of booms and depressions accentuating personal insecurity; (5) these booms and depressions have a tendency to grow more and more severe, and in this sense there is a secular tendency toward greater instability in prices and production.

Each of these statements asserts something about an observable quantity, the measure of which is not specified. None of them are direct inferences from the postulates of equilibrium economic theory. They represent what some people think they see or think they ought to see in the actual adjustment processes and development of a particular form of economic organization. It seems safe to say that there does not exist a positive theory of economic development—in the sense of a theory in an analytical natural science—accounting for growth and evolutionary phenomena of this sort. Speculation, rationalization, and illustrative arithmetic examples frequently accompany the assertions of the fact. But it is the fact itself that is not generally admitted, and the lack of consensus in this regard bars the way to the solution of particular problems of economic conflict.

The statements are quantitative statements, but a knowledge of methods of estimation and of tests of hypotheses is not sufficient for the resolution of contradictory beliefs. The meeting of minds on the truth or falsity of any such statement involves social discussion and prior consensus on just what the facts must show in order that the statement be generally accepted as true or false. It is not infrequent that participants in an economic discussion dealing apparently with observable quantities find themselves using "much the same undisputed facts to support opposite contentions."[4] It is no mystery, of course, how persons of unquestioned sincerity may reach opposite conclusions from the same set of facts. The reaching of conclusions is no simple process, and the crude facts require arrangement and orientation in terms of a set of ideas and questions that give the facts meaning. An appropriate

[4] This is a remark made by Professor Stigler in a discussion of the basing-point system.

way of measuring the quantity must be determined. The defining of the measure—that is, just what to compute, given the availability of acceptable data—is not a task for which the specialist in statistics would be particularly helpful, nor is it a problem the solution of which may be mechanically ground out by the application of economic theory. It is a problem of reaching a social consensus and its solution involves social discussion. In the above illustrations, the quantities are: economic efficiency, standard of living of a population, degree of mobility of families between income or social classes, degree of equality of income distribution, degree of competitiveness of an economic system, level of unemployment, the quantities pertaining to the business cycle, and degree of economic stability. These are not simple concepts, and one who is familiar with the controversies that prevail with respect to defining a measure for this quantity realizes the involved complexity of even the elementary-seeming notion of unemployment. Anyone present could easily think of numerous ways of defining a measure of any one of the above quantities that would be plausible in one context or another. When applied to a given set of data, these alternative ways of measuring something designated by the same term may give what appear to be incompatible results. Agreement must be reached upon a particular measure, which must be defined so as to have certain properties satisfying the requirements of the social discussion of the economic problem.[5]

It is clear that equilibrium theory is useful, and perhaps essential, in the procedure leading to agreement with respect to a definition of a measure—useful, in a manner in essence the same as that discussed above, as an instrument helping men to seek within their independent minds for what they will accept as a test for the truth or falsity of a particular quantitative statement. It is equally clear that such a use is far indeed from the ordinary conception of theory as a basis for empirical research. Once the measure has been agreed upon, then the question becomes a problem of estimation and of testing hypotheses. The methods of natural science strictly apply at this stage, and competence in working with the data and in statistical theory is called for.

The cumulation of factual data pertaining to the supposed performance of the economic system is one side of Mitchell's work. In speaking of the motives underlying Mitchell's role in the formation of the National Bureau, Professor Burns remarked:

---

[5] There are many elementary instances that illustrate this point. For example, it would seem relatively easy to define an acceptable criterion by which the "fairness" of a game may be judged or measured. But in the history of probability theory, the theory of a fair game has involved some bit of confusion and controversy; and agreement could be reached that a particular game is fair that would be classed as unfair in accordance with the most obvious analytical definition of fairness. This, in fact, is the case in the important application of the theory in considering the fairness of insurance premiums. For comment and references, see William Fellner, *An Introduction to Probability Theory and Its Applications* (John Wiley and Sons, 1950), pp. 196-200.

> Most important of all, here was an experiment in democratic action, men of many shades of political opinion joining in the undramatic enterprise of reviewing the factual findings of a technical staff. If a group so constituted as the National Bureau's Board of Directors could work harmoniously and accept staff investigations of a controversial question such as the proportion of the national income paid out in wages or accruing as profits, might not reason triumph over passion in an ever widening circle of men?[6]

In this aspect of Mitchell's work, his part was twofold: that of a social scientist in the part he played in the social discussion of how quantities should be measured in order to be relevant in the higher social discussion of an economic problem—the truth sought here is a moral, subjective truth, and economic theory as a part of a moral science comes to bear; and in addition to this, his role was that of a scientist in the ordinary sense of the term, exploiting a competence for estimating a measured quantity that will test the validity of a hypothesis. Philosophers since ancient times have pointed out that men's passions and anger are excited by expressions of view in problems of the first type but not in problems of the second.

III

The other aspect of Mitchell's work dealt with objective and in this sense "natural" phenomena. Professor E. B. Wilson has spoken of Mitchell as "essentially a naturalist: one who is at great pains to go out into the world of concrete and detailed fact to look and see what phenomena of a certain sort are really like, to find out in nature something that is new to knowledge"; and "as the systematic naturalist may compare the varieties, species, and genera with which he works," so Mitchell through simple comparisons with masses of statistical materials sought to discover likenesses and dissimilarities that might cumulate into a depth of understanding.[7]

This seems an apt analogy, but it is, in my view, an underestimate of the man (I do not imply that Professor Wilson errs in this) to emphasize the arithmetic details of the particular methods of measurement, comparison, and analysis that Mitchell found occasion to employ. To paraphrase and change the context of an earlier quotation, it is the spirit characterizing his research rather than the arithmetic method that is the more important. I use the term spirit lightly here and have reference to the essential ideas or vision underlying his collecting and arranging and comparing of quantities.

---

[6] A. F. Burns, *Wesley Mitchell and the National Bureau* (1949), p. 32.

[7] E. B. Wilson, "Measuring Business Cycles," *Quarterly Journal of Economics*, May, 1950, pp. 311, 317.

Mitchell, I think, conceived of himself as studying a living thing. He is known as a measurer of business cycles, and the business cycle is spoken of as the "unit" of Mitchell's study. But I believe that Mitchell looked upon the business cycle as only an important apparent behavior characteristic of the basic entity that he kept under observation. From this point of view, the actual arithmetic procedures adapted for measuring various attributes of the business cycle are interesting but secondary. As his ideas developed regarding how the thing that he was studying was put together and how it functioned, he felt around for ways of arranging and comparing new aspects of the data; and presumably if he had it all to do again, the details of his methods would be different from those that he happened to hit upon. The primary idea is not the method of measurement but rather the nature of the thing whose behavior is being observed.

Mitchell, it seems to me, held as the object of his inquiries the structure and functioning of what he saw as a vast social organism: the integrated economic system. He was, of course, much influenced by Veblen; and the idea basic to his work is the conception emphasized by Veblen of an economic system as a concatenation or articulation of industrial processes into a unified and balanced mechanical system of operations. Organization and structure are fundamental elements of the idea. An immensely complex division of labor and dovetailing of individually determined activities exist, and a system of concrete flows is a feature of the structure consisting of a population configuration of interdependently acting and reacting units. The ultimate units in Mitchell's work are, of course, the same as the units in neoclassical economic theory: the firm on the one hand and the family on the other.

These preconceived and speculative notions regarding the broad but basic features of a modern economic system were hypotheses subject to review, revision, and development as empirical investigations proceeded. No attempt was made, in the sense of morphology, to directly observe in detail this structure and the linkages between the different functioning parts. The empirical tests or confirmations of preconceptions were indirect. The conception of interconnections and balances within the great concert of economic processes implies certain possibilities in what we might observe when the whole system of individual economic processes is studied. Or if the conception is empirically valid, certain types of behavior are excluded as impossible.

While direct and systematic observation of structure and functioning was not attempted, neither were abstract and powerful methods of analysis applied in inferring from his preconceptions the implications that he selected to consider. Mitchell would have perhaps regarded such formalization as somewhat superfluous at the present stage of the inquiries. Intuition and common sense would indicate a sufficient number of implications and possibilities to be inquired into. In due time, as more is learned of the specific conditions under which the observable variation is being generated, there would as a matter of course come to be used more sophisticated procedures for deriving the implications of specified features of the structure, balance, and flow interconnectedness inherent in an economic system.

But Mitchell would have recommended to no one that he avoid, as a matter of principle, the use of formal methods. If they can be discovered, such methods may contribute greatly to the realization from speculative conceptions more or other implications than common sense would suggest. If they are behavior characteristics inherent in the nature of the flow system that we observe, common sense may be an unreliable guide to implications or to what might ultimately turn up as a satisfactory theoretical explanation.

This working toward the specification of the conditions of variation observable in the structure and functioning of an economic system is, to me, the important contribution of Mitchell and the research point of view that he represented. But, again, building upon or adding to the work of such a man consists not in merely mechanically doing with figures what he found expedient to do with them and accumulating more and more of what he, in his probing and searching, found occasion to accumulate. To build upon his work is to proceed from his point of view, seeing the outlines of the thing that he was observing and developing methods of measurement and description and glimpsing aspects of the phenomena that one might at least imagine Mitchell to have discerned and developed.

In the first draft of the present paper, I included an outline of what to me is the Mitchellian conception of the economy as a flow system. It represented my interpretation of the writings of Mitchell and of his principal associates but also of scattered work that has not been associated with Mitchell but which I look upon as fitting into his larger scheme. This part of the discussion has been dispensed with because of space limitations.

However, this basic conception, defining Mitchell's research point of view, constitutes a beginning of a formulation of a model system of interconnected economic flows. The elementary units from which the flow components emanate—the families and the firms—are constantly moving to and fro over space and are constantly dying out and being born. But a fairly high degree of stability is maintained in the group configurations and in the general population aspects of the system. The flows originating within a given concentration (a metropolitan community) of firm and family units typically have destinations close to the concentration center, these destinations having a characteristic density pattern. The flows coming into such a concentration center are from origination points having similarly a characteristic density pattern. The interconnections between widely separated concentration centers are to some extent direct but primarily indirect through numerous overlappings within the intervening concentration centers. By virtue of specializations and direct connections with other specialized units, some spatial groupings include disproportionate numbers of elementary units (families and firms) whose flows are less subject to easy management or whose flows are characterized by a systematic downward bias. The conditions under which other spatial groupings are developing may imply the reverse, so that in aggregate rises and falls of the payments flows of many such groupings, there may be in evidence a "normal" geographic ebb and flow of stocks of money funds.

All of this is a hypothetical conception, subject as ever to revision as empirical inquiries continue. There are, of course, many possibilities of combinations of perturbations and change that would lead to cumulative or periodic developments. But these possibilities have yet to be analytically developed. While economic theory of the neoclassical type seems to me essential in the discussion of the classes of problems presented in the first two parts of this paper, such theory seems not particularly pertinent for dealing with the problems of the third part. At least from a common-sense point of view (which, to be sure, I considered not entirely trustworthy above), it seems somewhat unimaginative to expect much to come from theorizing regarding the formal implications of an equation system derived ultimately from stable or predictable production functions of economizing firms on the one hand and from stable or predictable preference functions of economizing individuals on the other. Over the years for which we have observations on the performance of the economic system there have been radical and unpredictable technological and institutional changes. Yet there are regularities and uniformities evident in the statistics reporting the performance of the system; that is, there are behavior properties of an economic system that are apparently invariant with respect to the unpredictable change in the functions representing technological conditions of production and psychological conditions of consumption. A theory drawing inferences exclusively from numerical properties of behavior and technological relations that remain unchanged or that change in a predetermined way would seem to be peculiarly inappropriate for the analysis of performance characteristics that are independent of the parameters determining these relations at any point of time. This is no grounds for the avoidance, as a matter of principle, of the use of psychological or technological assumptions in the choice of modes of arranging and classifying data. But such assumptions are not the unique feature of neoclassical equilibrium theory. The principal feature of this theory as it was initially developed is the assumption of the existence of free individuals each owning certain amounts of resources and at liberty to choose as he individually sees fit the modes of use of these resources. The theory in essence is an axiom system, and the propositions inferred represent an analysis of the behavior properties of a hypothetical system of such freely choosing individuals organized for joint action. The development of the theory has accumulated additional sets of propositions inferred from alternative axiom systems in which various types of restrictions upon behavior are included. The use of this theory is essentially that of the use of probability theory, not in its bearing upon positive variation but in the discussion of the attributes of a fair game, the fairness of which is individually felt and not objectively observed. There, of course, is a conditional prediction involved in the use of equilibrium theory. But the conditional prediction that makes the theory important has to do with the general properties of some given system of economic organization, not the Laplacean paths of change of a set of variables.

STRAIGHT THINKING VERSUS INDUCTIVE RESEARCH IN THE SOLUTION OF ECONOMIC PROBLEMS

By FRANCIS M. BODDY
University of Minnesota

Economic problems present themselves differently to different observers, for the observers, in turn, express differing judgments concerning the relative importance of different aspects of the problems and exercise selection and specialization among the problems presented.

To many theorists the central problem is one of understanding and explanation of the motives and behavior of men in their economic activities and tracing the way in which these work out within the rules and bounds of the institutional setting to the solution of the general economic problem of producing and distributing the goods and services, controlling the use of resources, and deciding what is to be produced. Partly because our theories grew out of earlier theories of a market economy and partly because most of our current problems arise within a market system, the main emphasis lies in understanding such behavior and its consequences, with the aim of prediction, and perhaps the further aim of modifying such behavior and results by group action.

To increase our understanding and to make clear the areas in which logic and knowledge have not yet led to understanding, the methods of the older and more scientific disciplines have been seized upon.

Morris R. Cohen (in his article on "Scientific Method" in the *Encyclopaedia of the Social Sciences*) suggests that scientific method is "concerned with general laws which establish connections between diverse facts" or is "the way of increasing the reliability of beliefs or assumptions by eliminating or minimizing as far as possible the errors and illusions which obstruct human knowledge. . . . Logical proof or demonstration, not only in geometry and arithmetic but in all fields of science, reduces possible doubt as to a large number of propositions to that of a few simple principles. The proof of a proposition makes it impossible to deny it without denying the axioms and other propositions from which it is deduced. . . . From the nature of evidence it is clear that no one fact can prove another fact unless the two are connected by some constant or invariant relation. Scientific method is thus an effort to make explicit, and to test, the laws according to which phenomena are related to each other to form a system" (Volume 10, page 390).

The work of developing such a theoretical system of laws of individual economic behavior and of market results necessitates some simple (perhaps heroically simple) assumptions with respect to personal and group incentives, freedom of action, knowledge of alternatives, ability to make the economic calculations needed to establish the "best" choice, and other elements of the system. Given these elements or axioms, the theorist proceeds to deduce the consequences in terms of the market equilibrium input and output, price and return, for the individuals, business units and larger segments of the economy, and up to the economy as a whole.

Whether such constructs enable the theorist to understand and predict real behavior and real market results depends upon the realism of the axioms of his theory and the logical correctness and completeness of his deductions.

In building a construct aimed at containing the important essentials of economic reality, the theorist is faced with complexities beyond his present ability to handle, and admits a lack of detailed and specific knowledge which prevents him from quantifying much of the general knowledge or impressions of reality that he has.

If he is a determinist, he is convinced that there is an explanation for all economic behavior and its results; yet he is (or should be) suspicious of assuming that he can determine the economic motives or predict the action of others, or that he can even take into account all the possible effects of changes in the noneconomic determiners of action that arise from causes that lie outside his field of knowledge.

To test the validity of his constructs he may adapt the method of the physical scientist, constructing a hypothesis based on his construct and setting up an experiment (or waiting for one to happen) to test it. Failure of the event to confirm his hypothesis indicates a failure in his logic or a failure of his axioms or assumptions to fit reality. Success, on the other hand, is not proof, but mere confirming evidence, unless he is sure that only this construct could explain the result.

Since the logic of his analysis may be tested by others by the accepted rules of reasoning, the question can usually be reduced to the validity of the assumptions. Here, at least, one philosopher, F. S. C. Northrup, believes the economist is in a uniquely favorable position by being able to test his assumptions (axioms) directly without the need to appeal to tests of their deduced consequences.[1]

The theorist relies upon introspection, observation of others, and reports by others based on their introspection and observation to verify the general validity of his assumptions as to the realism of economic motivation and the power of such motivation in determining choices and directing economic behavior. He should be suspicious that his training and special interests have biased his observation of others and his interpretation of their reports, and even may modify or make nontypical his own motivations and behavior; but this is a problem of all students of various aspects of human and social behavior.

---

[1] *The Logic of the Sciences and the Humanities*, p. 247.

With respect to the assumptions concerning the market conditions and the general institutional framework within which the individuals operate and which, in turn, limits or modifies their behavior, he must rely on observation and reports of those features which general theoretical considerations indicate to be those which are the controlling factors in establishing the market results.

Finally he must, when and where he can, look to the actual market results as evidence of the validity of his assumptions and analysis in explaining those results.

Observation, therefore, enters at many stages, in deriving and testing generalizations as to economic motivation, in describing the framework within which economic activity takes place, and in registering the results of such behavior.

Pure deduction from hypothetical assumptions to logical conclusions, without observation of reality, may be an interesting and even useful occupation, but can contain no more realism than is (accidentally) contained in the assumptions. Pure observation—pure inductive research—on the other hand, without direction from deductive theory, will only accidentally discover any unifying relationships or principles. Cohen's article is again worth quoting on this point:

> While there are no rules or methods which will produce scientific discoveries or inventions, there are certain necessary conditions which must be observed in order not to make the effort at discovery impossible. Previous knowledge and reflection are such necessary (though insufficient) conditions. Great scientific achievements are never made by those who start with an open mind without any knowledge or anticipation of nature. In order to find something we must first look for it. And the process of formulating new hypotheses or new experiments to test old hypotheses, while it requires original insight, is necessarily dependent on logical deduction from previous knowledge. Deduction is thus a necessary part or instrument of research.
>
> Confusion on this point has resulted from the Baconian myth of induction according to which the true scientist begins with the observation of the facts without any anticipations of nature.
>
> . . . .
>
> It is not easy to start with observing the facts, for to determine what are the facts is the very object of scientific inquiry. (Page 391.)

Where previous observation and tested generalizations and a body of deductive theory based on them are in a well-developed stage, inductive research can be given specific purpose and direction; but in relatively undeveloped areas inductive research must depend heavily on intuition or imperfectly formed hypotheses with the danger that the "facts" may be wrongly or not usefully selected for study and that generalizations from them may be the result of accidental bias in the selection of facts, or give no basis for the discovery and formulation of hypotheses concerning the relationships between them.

Such a point of view is accepted, I believe, by workers who by differences in interest or training tend to emphasize either the deductive or inductive approach.

In economics the deductive approach seems to be relied upon greatest in the field of price theory, particularly the field of individual relative prices, particular markets, and the like, and its greatest development has been in the general area of microstatics. Microdynamics suffers from the lack of sufficient observational generalizations as to the facts of dynamic conditions and forces and the development of deductive theory based upon them.

In the macroeconomic area—the study of the aggregates or averages of an economic system—the emphasis seems to be on the inductive type of research, for the need for the recording and classification of facts, directed by such deductive theory as is available and supplemented by the intuitions of workers with a "feel for the facts," is great. The development of deductive theory in this area must be slow and highly tentative because of this.

The availability of much statistical material in this aggregative area has led to much analysis of relationships by means of essentially correlation methods, the study of statistically stable patterns in the data, and some model building, in an attempt to predict future facts or to deduce the consequences of predicted changes in the data or the results of imposed changes.

The possibility of building a theoretical dynamics which could completely specify the characteristics of the system at future dates from the specified conditions of the system at a given date seems remote, and for a variety of reasons. One obvious one is the essentially variable and changing character of the "particles" of the system—the modern man. Not only is he changing, but observation of particular units to see how they are changing may in itself make their changes unlike those of individuals not studied. As Boulding has suggested, it is as though in biology the cells not only had to be stained to be observed but blushed when looked at. Another is the complexity involved in handling the large number of variables that one has strong reasons to believe to be necessary to include, even with heroic simplification and consequent lack of precision in predicting reality. Moreover, it may well turn out that variables neglected or allowed for as "random" may at times have a decisive influence on the results. Finally, as Northrup suggests, the building of dynamic models on the style or by the methods of the physical sciences may be doomed to failure at the beginning because of the lack of any conservation laws applying to the fundamental forces of an economic system—the wants of its members.

At the present and relatively undeveloped stage of economics, the application of theory or methods to the solution of real problems can by no means guarantee success, although the simpler (and less important?) the problem the greater the likelihood of success.

Fortunately, even complex problems are nearly always problems of "a little more" or "a little less"; that is, they are not problems of a completely new situation, but are problems of changes in the present situation. For such problems the marginal method of analysis developed in general value theory seems an appropriate and powerful tool. It applies the rule, as expressed by Marshall, that we must go to the margin to study the action of those forces which govern the value of the whole.

It suggests that the impact of change can best be analyzed and predicted by looking to the individual points of impact—the households, firms, and individuals who make the determining decisions—and that the most informative observations are those of the effects at the intensive and extensive margins.

The impact of increased taxation, changed interest rates, changed absolute or relative demand, government spending, or other predicted or policy directed changes can best be studied and their effects analyzed by detailed observation of individual reactions. Here, of course, deductive theorizing must be supported by real knowledge of the motives and alternatives that control the decisions, and it is here that detailed knowledge must replace the general assumptions of armchair theorizing. As inaccurate or incomplete information or "random effects" give inaccurate prediction at the specific points of impact, the tracing of secondary and further effects as they impinge on the margins becomes increasingly subject to error. These errors may, however, be reduced by more and better knowledge. And deductive theory or, perhaps better, "straight thinking" (deductive theory in the hands of an informed observer) can best define what facts are necessary for the solution.

The usefulness of problem solving methods must be ultimately evaluated by their ability to give correct or workable solutions. Perhaps in our present state of knowledge, the analysis of the behavior of aggregates, even if their averaging effect must cover up the varied impact of forces at the diverse margins involved, can give better guides to policy action in some problem situations. The users of methods in the solutions of problems are in the best position to answer such questions. Many deductive theorists, however, who wish understanding as well as prediction will be uneasy concerning the validity of such predictions or solutions until such aggregative methods or models, or inductive analyses, are able to explain the individual impacts of the forces on persons as decision makers in what we hope we can maintain as an essentially individualistic free economic system.

DISCUSSION

Clifford Hildreth: This discussion is limited to some aspects of the role of theory in making individual and social decisions. It seems conceptually useful to distinguish two aspects of decision making: (1) the primarily scientific and amoral problem of analyzing and predicting the relevant consequences of alternative decisions or actions; (2) the primarily moral and ascientific problem of evaluating and choosing among alternative consequences.

In practice, it is difficult to make the distinction precise since the immediate consequences of practical decisions are, in turn, conditions for more remote consequences. As we look at more remote consequences, scientific analysis and moral evaluations tend to intermingle. The distinction does seem to be justified by our unwillingness to accept the same kind of evidence in the two kinds of problems.

It is interesting to note that when essentially scientific procedures are applied to decision making problems, the criterion for evaluating the results of alternative decisions is taken as given a priori and no effort is made to derive it analytically. We thus have various technical definitions of efficiency in engineering problems: an assumed utility function or goal of profit maximization in the analysis of individual economic behavior; a given weight function in the theory of statistical decision functions. In the economic analysis of social choice we have an assumed social welfare function, or an array of individual utility functions, or sometimes still simpler assumptions; e.g., that an increase in national income (according to some measure) implies an increase in welfare.

As Professor Vining pointed out, acceptance of democratic values involves the use of consensus rather than coercion as a way of making social decisions and the process of social discussion that he outlined is the technique for seeking consensus.

Historically, classical economic theory has undoubtedly had both scientific and moral content for those who developed and used it. It has been noted that this duality has sometimes been a source of confusion. I am inclined to disagree with Professor Vining's statements to the effect that the primary purpose of equilibrium theory is the development of moral criteria rather than scientific description and prediction. I believe that the role of economic theory as a tool of science has been dominant in the thinking and writing of most economists. Furthermore, I believe that viewing classical and current theory as mainly concerned with scientific aspects of decision making is not inconsistent with most of the evidence that Professor Vining has presented.

I should like to take two examples. Consider, first, reports that men who function as economists for corporate enterprises have little to gain from knowledge of the various theoretical works regarded as basic by academic economists. Accepting such reports as common I should like to venture three partial explanations, not mutually exclusive: (1) persons making practical business decisions may underestimate and understate the extent to which they are influenced by theoretical doctrines; (2) perhaps opportunities to usefully applying existing theories are not being fully exploited; (3) economic science may still be in a comparatively immature state. Future development and extension of economic theories may provide guidance in practical situations to which academic economists can now contribute little.

I do not feel that I am in a position to say how much weight should be given to the first and second explanations. Frequent complaints of lack of communication between businessmen and economists might lead one to speculate that the second is of some importance. However, it is difficult to say to what extent existing theory could have been effectively utilized in making the kinds of decisions that Mr. Dennison discussed. Certainly we would expect better communication both to extend the application of our present theory and to aid in its further development.

Professor Boddy has sketched some of the methods and limitations of economics as we now know it and offers some conjecture as to lines of development that may increase its usefulness in solving practical problems. In this connection, the comparison between economics and statistics suggested by Professor Vining is of interest. While it is true that the "foundations" of statistics as expressed by Cramer are generally recognized as underlying practical work in statistics to a much larger degree than is true of the corresponding fundamental treatises in economics, it is also true that many of the useful techniques of statistics were developed before theoretical works as sound and as comprehensive as that of Cramer existed. Statistics seems to me to offer a good current example of how the usefulness of a formal theoretical approach increases as the theory is developed and made more realistic. Perhaps Professor Wald's theory of statistical decision functions deserves special mention as a recent development in statistical theory that provides a formal framework more closely related to many practical decisions than earlier theories, and it has led to a number of new and useful techniques.

I should like to comment briefly on another illustration from Professor Vining's paper. If we consider the uses that have been made of our theoretical apparatus in recent discussions of farm policy, I believe we find that they involve application of theory primarily as a scientific tool. When a new policy is proposed, economists tend to seek answers to questions like the following: What would be the effects of the policy on agricultural production? On agricultural incomes? On the distribution of resources between farm and nonfarm employment? How much government spending is involved in the proposal? What would its fiscal effects be during a depression? A period of inflation? I regard these as essentially scientific questions. When these and similar questions have been answered to the best of our ability, we still need criteria for saying whether the indicated consequences are better or worse than the consequences of alternative policies. Fundamentally, I believe these latter criteria must be ethical and I question that economic theory can contribute much to their development.

In the beginning of my discussion, I suggested distinguishing between scientific aspects and moral aspects of decision making. Much of the remainder of the discussion was spent in presenting some brief arguments that we could expect economic theory to contribute mainly to the scientific aspects of practical problems, and that continued development of theory could be expected to increase the importance of its contributions. Neglect of moral aspects is not intended to imply that I consider them of lesser importance but is necessitated by the fact that I do not feel prepared to discuss moral issues usefully at this time.

GEORGE J. STIGLER: Discussions of methodology usually embrace, and sometimes confuse, two very different problems: how to invent a hypothesis and how to test it.

We know very little of the process of intellectual invention—certainly too little to give dogmatic advice. Some men employ chiefly introspection, probing their souls to discover how the world should work. Some men get their ideas by reading what other men have written on a subject, and then refining and elaborating this heritage. Some men climb over mountains of data, and somehow extract general conceptions in the process.

I am not prepared to assert that chief reliance upon any one of these sources is best for any given person. All are worthless when employed by an inferior mind; perhaps any is satisfactory for a genius. It seems that even the richest imagination is soon exhausted by introspection, but in the process some illustrious works—including those of Cournot and Walras—have been created. The reworking of predecessors' ideas will seldom lead to very fresh work, and after a while this source seems to become boring—at least these economists tend to leave economic theory after a time. But we owe to this method such things as Pareto's pure theory and John Stuart Mill's *Principles*. Observation of the world—whether statistical, historical, or simply literal—is the richest of all sources of new ideas, and also the most dangerous. The observer may be overwhelmed by the complexity of what he sees, and if he sees well, he is almost certain to find contradictions with any generalization he wants to make. When it is managed well, however, this source yields the freshest and most impressive contributions, among which I would number Marshall's *Principles* and Smith's *Wealth of Nations*.

Not only do we not know how to teach students to invent theories, but much of the advice that is offered is surely wrong. The admonition to keep one's mind open and skeptical, for example, is fatal. Every useful hypothesis will soon encounter facts that are at least superficially adverse, and one must love his own creations and cling stubbornly to them until the contradictory evidence is overwhelming. On the whole, economists fully meet this recommendation. But I shall not tarry longer with invention. Creativeness is not taught by the wisest methodology, although it has been lost because of a preoccupation with methodology.

To test a hypothesis is an entirely different matter. Here we can be reasonably certain of what is right practice. Specific hypotheses concerning observable behavior are the subject of the theory of statistical inference, and this theory supplies a general logic, and often exact tests, by which to choose among alternative hypotheses. Occasionally we lack the data necessary to carry out the tests, but usually we lack the slight imagination necessary to rework the theory so it bears on available information and the enormous energy necessary to ferret out the information.

For example, Schumpeter argued that monopoly was a cheap bait of economic progress, as against the alternative and more orthodox view that monopoly is a barrier to technological progress. We could rework his suggestion into a more precise theory—it needs this reworking—and then set about, say, comparing the rates of technological progress in the same industries in various countries or regions where the extent of monopolization differed appreciably. There are no difficulties in principle, but anyone who has worked with this kind of problem will realize how extremely laborious it would be to accumulate even half a dozen tolerable comparisons.

It is a major source of the immaturity of economics that almost all of us avoid such tedious and exasperating work and instead quickly soar to the higher levels of generalization. The annual list of doctoral dissertations in economics teems with subjects like "The Theory of Innovation," "Institutionalism Triumphant," and "The Consumption Function in Time and Space." Out of curiosity I looked up the dissertations in chemistry, and they sound very different: "The Inhibitory Effect of Oxygen on the Bromination of Cinnamic Acid," "The Gaseous Thermal Polymerization of 1,3-Butadiene," and, at a higher level, "Studies of the Biosynthesis of Ascorbic Acid by the Albino Rat."

I do not wish to condone our impatience with laborious research, and I hope it will disappear. Its fundamental explanation, however, is fairly clear. We desire to answer the questions an impatient world puts to us: how to eliminate poverty, how to eliminate depressions, how to draw the new tax bill. For surely, the most humble of us will admit that little as we know about these things, it is more than politicians or businessmen or sociologists or even lawyers know. Many economists entered the profession in order to answer precisely these questions, not to be "cold-blooded" scientists chasing down the history of technological advances in the German steel industry. I have no neat solution for this problem of social urgency in the face of scientific immaturity, but surely not all ten thousand of us are needed all the time to advise on matters of high policy.

This problem of social urgency helps put the "versus" between straight thinking and inductive research in Professor Boddy's title, for under ideal conditions they are inseparable friends. If I may identify straight thinking with neoclassical economics and emphasize the quantitative types of inductive work, then the conflict is this: we have little quantitative information on many great questions and what little we have is often at least superficially inconsistent with received economic theory. As examples, there is no direct evidence (by which I mean no one has assembled and analyzed it) supporting the view that heavy excess profits taxation encourages waste; and statistics like the BLS price indexes and the FRB production index suggest to some (rather suggestible) economists that price controls in the last war kept down prices and did not affect output adversely.

When we must reach a conclusion (i.e., when policy is involved), I believe that the received theory deserves more respect and quantitative materials less respect than are commonly accorded them. There is a widespread belief that neoclassical economics is a fine logical system which has little bearing on the real world. Instead, it is more a codification of past experience that is only tolerably logical. The codification is not very explicit: a reference is not made to an event or a statistical study after every sentence. Partly this documentation is not given because the theory is moderately logical; so one special theory owes its form in part to the implications of empirical knowledge on other special theories. To give only one instance, certain aggressive oligopolistic practices such as local price cutting have definite implications for the theory of the capital markets.

It follows that on my view Professor Vining has ascribed too much importance to the normative function of price theory. I think that economists, including government economists, would be better off with a working command of Marshall's economics than with a command of Cramer's statistics, if a choice had to made. Yet some exaggeration of the normative role is permissible to offset the excesses of modern scientism, although I would not have chosen Mitchell as a name to associate with this position. Vining's own spatial picture of the economy is fine and imaginative and I am eager to see the completed researches which he is conducting in this area.

CAPITAL AND INTEREST

SOME PERSPECTIVES ON CAPITAL THEORY

By J. FRED WESTON[1]
University of California at Los Angeles

I. *Introduction*

The history of capital theory is filled with dispute. The issues debated by Böhm-Bawerk, J. B. Clark, and others were again contested during the thirties. Despite the great outpouring of literature on capital theory, some basic disagreements seem yet unresolved. Because the fundamentals of capital theory are also pivotal in the recently developed long-run employment theories, the current significance of and interest in capital theory have been heightened. It appears useful, therefore to attempt to summarize some of the major issues in capital theory.[2]

The roots of divergent positions on capital theory are deep in the past. Two main streams of doctrine may be delineated. What has come generally to be referred to as the Austrian theory of capital may be regarded as having its origins with the classical economists and can be traced through W. S. Jevons, E. von Böhm-Bawerk, K. Wicksell, and F. von Hayek. The other may be conveniently described as the productivity concept. Leading figures in the development of this approach are Leon Walras, J. B. Clark, H. J. Davenport, and F. H. Knight. Irving Fisher may be mentioned as combining elements from both positions. Keynesian macroeconomics is not explicit in the kind of capital theory upon which it rests, but capital theory is nonetheless important to it. In some respects it appears to be Austrian oriented, but is not consistently so and at places avoids associated implications. Keynes remarked in his chapter, "Sundry Observations on the Nature of Capital," that it is preferable to speak of capital as having a yield rather than as being productive because if capital became less scarce its yield would diminish.[8] This is a surprising statement from a great mind for it hardly explains a distinctive characteristic of capital goods since it is equally applicable to all productive agents and products. To get at the basic nature of capital, it is fruitful to compare and contrast the ideas of the two groups.

---

[1] Considerable benefit in writing this paper was derived from discussions with P. T. Homan and F. E. Norton, Jr.

[2] To reduce the volume of footnotes, bracketed references are made in the text to the following items, which are identified by the corresponding numbers in parentheses: (1) W. Fellner and H. S. Ellis, "Hicks and the Time-period Controversy," *Journal of Political Economy*, 1940, pp. 563-578; (2) E. E. Hagen, "Capital Theory in a System with No Agents Fixed in Quantity," *idem*, 1942, pp. 837-859; (3) F. A. von Hayek, "The Mythology of Capital," *Quarterly Journal of Economics*, 1935-36, pp. 199-228, also in *Readings in the Theory of Income Distribution*, pp. 355-382; (4) N. Kaldor, "Annual Survey of Economic Theory: The Recent Controversy on the Theory of Capital," *Econometrica*, 1937, pp. 201-233; (5) *idem*, 1938, pp. 163-176; (6) F. H. Knight, "The Quantity of Capital and the Rate of Interest," *Journal of Political Economy*, 1936, I, pp. 433-463, II, pp. 612-642; (7) *idem*, "On the Theory of Capital in Reply to Mr. Kaldor," *Econometrica*, 1933, pp. 63-82; (8) *idem*, "Diminishing Returns from Investment," *Journal of Political Economy*, 1944, pp. 26-47; (9) *idem*, "Capital and Interest," *Encyclopedia Britannica*, 1946, pp. 779-801, also in *Readings in the Theory of Income Distribution*, pp. 384-416; (10) O. Lange, "The Place of Interest in the Theory of Production," *Review of Economic Studies*, 1935-36, pp. 159-192; (11) *idem*, 1936-37, pp. 231-252; (12) F. Machlup, "Professor Knight and the 'Period of Production,'" *Journal of Political Economy*, 1935, pp. 577-624, also pp. 625-627, 808; (13) A. Smithies, "Professor Hayek on the Pure Theory of Capital," *American Economic Review*, 1941, pp. 767-779; (14) D. McC. Wright, "Professor Knight on Limits to the Use of Capital," *Quarterly Journal of Economics*, 1943-44, pp. 331-358.

II. *Basic Elements in the Austrian Theory of Capital*

Bases for Distinguishing Between Factors. The Austrian concept of capital begins by drawing a distinction between factors on two bases: (1) original versus produced factors and (2) permanent versus nonpermanent factors.

Sometimes different aspects of original factors are emphasized by individual writers, but the concept includes at least the following views. Original factors are free gifts of nature. They are nonaugmentable, which is to say that they have zero elasticity of supply. While land, of course, was held to be the leading example, labor also was included in this category. Although the population varies, it was held not to vary in response to economic influences. Hence the supply of labor was not considered to vary in response to changes in its price.

Also, original factors seem to be regarded as permanent [(3) pp. 369-373]. Permanent factors are resources which exist without being maintained, whose services flow at a rate independent of their prices [(4) pp. 203-204]. However, even if it could be demonstrated that some productive agents represent original resources, these qualities are not necessarily indestructible. The fertility of land may be exhausted by inadequate maintenance. Similarly, permanent resources, if such there be, could be augmentable. Hence, regardless of the validity of the concepts, they are separable. Original factors could be nonpermanent. Permanent factors could be augmentable; i.e., produced.

Periodic Production and Consumption of Capital Goods. The nature of the economic process described by the time period theorists proceeds from the view that productive agents can be divided into two broad classes, the original and permanent agents—land and labor—in contrast to the produced and nonpermanent agents—capital. Production involves the application of original or primary agents to the construction of produced agents. The cycle of the process is reflected in a series of periods: (1) the construction period of the produced agents, (2) the length of time the produced agents are sources of outputs until they must be replaced, and (3) the durability of the final outputs of the nonpermanent goods, i.e., durability of consumers' goods.

---

[8] *General Theory,* p. 213.

Since the essentials of the Austrian theory were initially set forth in connection with the formulation of the idea of an investment period, this concept will now be analyzed. The Austrians also recognized a productivity influence (cf. Böhm-Bawerk's "third reason"). However, their productivity theory becomes smothered by the expositions on measuring the quantity of capital by "degree of roundaboutness."

III. *The Concept of Investment Period and Its Uses in Capital Theory*

Explanation of the Concept of the Investment Period. As Hicks has observed, "Nearly everyone who comes to the study of capital falls a victim to Böhm-Bawerk's theory at some stage or other."[4] The theory referred to has been termed variously "degree of roundaboutness of production," "period of waiting," "period of maturing," "time structure of production," "investment function," or "investment period." The last named expression will be used to refer to the idea. The investment period is the summation of the construction period of a capital good plus its productive length of life period (durability).

The essentials of the theory of the investment period are combined in the following elements. (1) These are two basic types of factors of production, original factors and time or waiting. (2) The production process reflects the periodicity of the agricultural cycle. The services of original factors produce successive units of capital with little aid of existing capital. Each unit of capital moves to maturation in which it gives off consumers' goods which furnish consumption during the period of waiting for later inputs in their turn to mature. (3) The amount of capital employed in roundabout processes is measured by the amount of waiting. (4) A fall in the rate of interest results in an altered structure of production. Relatively more factors are used to produce relatively more indirect goods or producers' goods. There is relatively less "direct consumptive use of some labor hours" [(12) p. 595]. Some of the labor hours will now bring a return in consumption units only after a longer time interval than was the case in their former use [(3) p. 363]. Lengthening the production period does not necessarily mean that goods which are more durable are produced, but that more goods with some durability are produced; so that the average time that original factors are embodied in capital goods or the quantity of capital goods has increased [(12) p. 595]. To use David McCord Wright's example, some agents have been shifted from the employment of gathering coconuts to the employment of making polished sticks used in knocking the coconuts off the trees [(14) pp. 333-335].

---

[4] J. R. Hicks, *Value and Capital* (Oxford, 1929), p. 192.

Purpose of the Investment Period Concept. It would seem to be a reasonable inference that Böhm-Bawerk's capital theory was formulated, among other reasons, to be consistent with Austrian value theory. In Austrian value theory, cost is recognized to influence supply. But utility determines ultimate value which determines cost. Hence utility controls cost. Austrian capital and interest theory fits into this broader framework. Since original factors were unproduced and permanent, cost could not influence their supply. Capital goods are stored up land and labor produced with the co-operating factor—time or waiting. Interest was determined by agio or time preference which is again a utility approach to value.

The investment period concept was used in more recent times by Machlup and Hayek to explain business fluctuations in terms of imbalances in the time structure of production in relation to interest rate or "profit" rate movements.

Criticisms of the Investment Period Concept. The investment period concept as a measure of capital quantity has been attacked on the following grounds. In the first place, it is not accurate to describe capital formation in terms of the application of original factors to create produced factors. Resources are produced with the aid of the services of all kinds of resources. The services of produced resources are applied to the production of further produced resources. "Only the first infinitesimal increment of capital at the beginning of economic history could possibly be the product of 'other factors'" [(6) p. 454, n. 187]. The fact of co-operation between capital goods and "other agencies" in all types of production is said to make determination of an investment period impossible.

In the second place, the attempt to generalize the description of the production process as consisting of a determinate lag between production and consumption is not defensible. Production and consumption is simultaneous in the sense that, in Hicks's description, "it is ordinarily intended that current input shall be succeeded by an indefinite stream of future inputs, giving rise to an indefinite stream of future outputs."[6] It is not possible to distinguish particular outputs as due to particular inputs. It is known only that there is some current rate of input and some current rate of output. "And taking production in the value sense, the result is instantaneous, whether in the form of a service (instantly consumed) or in that of a net addition to assets" [(6) p. 456].

Finally, even with respect to individual capital goods, it cannot be said that a piece of equipment has a determinate lifetime *ex ante*. The period of a given production plan is indeterminate *ex ante*, because the capital value of the equipment is intended to be maintained as long as expectations are unchanged. The interval after which the capital value of specific equipment is no longer maintained becomes determinate *ex post,* but at this point the interval has lost economic significance [(1) pp. 574-575].

---

[6] Hicks, *op. cit.*, p. 218.

The investment period has been held invalid on three grounds: the joint co-operation of all types of resources in production, the inadmissibility of a determinate lag between production and consumption, and the impossibility of determining *ex ante* the period of maintenance of a capital investment. However, attempts have been made to rehabilitate the investment period concept in forms avoiding these objections. These are now briefly described.

Attempts at Rehabilitation of the Investment Period Concept. Three major forms of rehabilitation of the investment period concept have been formulated. The first is by Kaldor. He states: "There can be no doubt that most resources, *as defined and differentiated by the market,* are augmentable to a certain degree. Land can be improved by fertilization, the supply of skilled labour can be increased by more training, the amount of hydro-electric power can be augmented by the utilization of yet unexploited waterfalls" [(5) pp. 172-173]. But he observes that augmentation is possible only at increasing cost and there are always some elements which cannot be augmented at all. He therefore concludes that the "law of roundaboutness is merely a roundabout way of expressing nonproportional returns" [(4) pp. 231-232]. When capital quantity is increased, it may be said either that the investment period of the relatively augmentable factors has increased or that the marginal productivity of the services of the relatively augmentable factors has decreased.

This formulation provides an index of capital intensity [(5) pp. 166-171]. However, it can hardly be considered to be a restatement of the investment period, which purported to provide a measure of absolute capital quantity. Knight observed, with respect to the proposition that the investment period really represents the law of nonproportional returns, "if this is what is meant I see no reason for saying anything else, and cogent reasons to the contrary." [(7) p. 64; cf. also the associated footnote.]

The idea of capital intensity is relevant for some economic problems, e.g., the issue of secular stagnation, since capital deepening represents one of the ways in which society may effectively utilize additional investment. However, degree of roundaboutness is not the crucial element. This does not deny that time is an important influence for economic theory, but not in the manner indicated by the Austrian theory.

After demolishing traditional formulations of the time period concept, Hicks presented his own interpretation. He proposed that the average period be measured by the elasticity of capital value with respect to the discount ratio.[6] When the interest rate falls, the volume of the flow of near term surpluses is decreased and some later surpluses are increased. (Surpluses are defined as receipts less expenses on a cash basis.) Although the structure of production is unchanged so that new processes have the same technical character as the old, the average period is increased in the sense that the stream of surpluses is given a crescendo.

Fellner and Ellis have pointed out that this formulation rests upon a special definition of surpluses. If net receipts are calculated on an accrual basis, interest elasticity of the present capital value does not shift in the manner described by Hicks. Further, even under his special definition of surpluses, their time distribution does not change permanently. The crescendo increases only temporarily while appreciations are deducted from net receipts. Only during "the interval of adjustment, the length of which depends upon the mobility of the system," is the average period as defined increased [(1) pp. 577-578].

Hayek utilizes an investment period concept in his device, the time structure of production.[7] He identifies later and early stages of production as respectively stages in which labor is invested for short periods or for long periods of time. The implications of Hayek's formulation with respect to capital theory and apart from its cycle theory aspects may be commented upon briefly. Even if the conceptual measurement difficulties are overlooked, the length of time for which labor is "embodied" in capital goods still cannot be shown to be proportional to the quantity of capital; a quantity of capital can only be indicated in value terms. Also, only the construction period, not the investment period (construction period plus instrument durability), is relevant (and is only partially relevant) as an index of agent mobility. Further, it is likely that differing income elasticities of demand and differing factor supply elasticities are more relevant categories for analyzing possible structural imbalances caused by changes in aggregate income, than is a classification of economic segments based on the average period of time for which labor is "stored." With reference to rehabilitation of the time period idea, it is certain that in this formulation the investment period cannot be used as a measure of absolute capital quantity. It may be concluded, therefore, that the burial of the concept of investment period as a measure of absolute capital quantity was final and attempts at resurrection have been unsuccessful.

---

[6] Hicks, *op. cit.*, pp. 186-188; 217-226.

[7] *Prices and Production* (1935); *Profits, Interest, Investment* (1939).

IV. *The Productivity Theory of Capital*

To this point the nature of the productivity theory of capital has been indicated only indirectly in criticism of the Austrian doctrines. It is useful to summarize the positive contribution of the productivity theorists in a series of propositions.

First, a distinction between agents or capital goods and their services is made, as was clearly shown by Walras. As Knight has phrased it, "the only product actually consumed is a service, which never has 'existence' " [(7) p. 76]. Further it is emphasized "that what is really bought and sold in any sale transaction is some stream of service rendered, or more generally to be rendered over some period of time" [(6) p. 437].

Second, capital goods are defined as sources of services streams. Capital goods, "like heavenly bodies, emanate light and absorb light." Services flow at a rate the dimensions of which are intensity and duration. Intensity may be conceived as measured in terms of width or depth. A capital good therefore represents an economic service potential.[8]

Third, capital is ubiquitous. It follows from the above that all agents or resources which possess a service potential are capital. But this definition seems to embrace all agents and goods and requires consideration of the distinction sometimes drawn between original (nonaugmentable), permanent resources and produced (augmentable), nonpermanent resources.

The validity of this last distinction is questioned by the service productivity theorists. Historically, it is held, all resources are discovered and developed at a cost and do not therefore represent free gifts of nature. With regard to augmentability, the supply of land services is increased by the use of fertilizers, irrigation, and crop rotation. The supply of labor services may be increased by training. Further, resources are subject to decline in quantity (depletion) and can be maintained only at a cost. Agricultural land and mineral resources are examples. With respect to labor, Knight has put the argument succinctly:

> Even in a free society, human beings are productive agents and are produced at a cost, and this is obviously true of the qualities which give their services economic value. Birth rates, as well as training, are influenced by the expectation of earning power, much as in the case of any investment, which looks beyond the maker's own lifetime. In extreme cases, as when a youth borrows money to secure a technical education, the difference is reduced to a minimum [(9) p. 393].

The statistical analyses carried out by J. R. Walsh substantially corroborate these observations with respect to investment in education. He found with some exceptions that investment in higher education of several types tends to be carried to the point where the cost of the incremental investment approaches its value measured by the discounted differential net income to which it gives rise.[9] He concludes that "acquired and useful abilities" appear "to be a genuine form of capital, supplied under the same conditions as prevail in the market where ordinary and necessary capital returns are determined and paid."[10]

---

[8] Cf. W. J. Vatter, *The Fund Theory of Accounting* (Chicago: University of Chicago Press, 1947), pp. 16-17.

On the basis of the considerations indicated, the productivity theorists hold that no resources are original or permanent. While this position may be substantially valid, there are, of course, economic bases for distinguishing between agents. This is to say that even if all agents and commodities are capital goods because they are sources of service streams, they may be different classes of capital. If the substitutability of agents in production processes is low, this must reflect the fact that the economic nature of their service streams differs. The elasticities of substitution may be low and the elasticities of supply of agents may vary widely, thereby providing meaningful bases for distinguishing between agents. However, it is quite likely that the categories so established would cut across the traditional threefold factor classification.

Fourth, the discount factor equates the values of a stream of inputs and a stream of outputs. The essential nature of investment is the sacrifice of consumption of some intensity over some finite period of time. This represents a construction period during which a net income stream is invested. We have therefore a series of construction costs or inputs, C, committed at different intervals and a series of net returns, Q, over the future.

$$\frac{C-n}{(1+i)^{-n}}+\frac{C-(n-1)}{(1+i)^{-(n-1)}}+\dots+C_0=$$

$$\frac{Q_1}{(1+i)}+\frac{Q_2}{(1+i)^2}+\dots+\frac{Q_n}{(1+i)^n}$$

The interest rate or discount factor equates these two series. While a finite quantity of capital must be defined in terms of a rate of interest, the rate of interest is definable without capital quantity; so circularity is avoided.

Although the costs and returns are over a period of time, time is not a fundamental factor in the theory of interest. The interest rate represents "only a relation between an instantaneous rate of investment and a resultant instantaneous rate of growth in potential income" [(6) p.

---

[9] J. W. Walsh, "Capital Concept Applied to Man," *Quarterly Journal of Economics*, 1934-35, pp. 255-285.

[10] *Ibid.*, p. 280.

434]. Further, the pattern of the net returns can be converted into any time shape. Since provision for indefinite replacement is made from current gross yields, it is often convenient for comparison purposes to represent the time pattern of the net returns as a permanent income stream of uniform level.

Under conditions of perfect competition, in an economic system in full equilibrium, existing resources are apportioned between uses so as to make the rate of return uniform for the whole economy at the highest level which can be obtained under existing technical and other circumstances [(6) p. 396]. A rough representation of this theoretical formulation is exhibited by the securities markets. Prices of securities move in such a relationship to varying expected dollar returns to result in equal yields, except for the influence of lack of perfect foresight and differences in estimated risks.

Fifth, capital may be regarded as fund of value. Sources of services are embodied in concrete instruments. The instruments are subject to change in form; i.e., resources are transferable from one use to another. The total capital of an economic system may be regarded as fund of productive capacity. Since capital goods are heterogeneous and changing, it is useful to have a measure of total productive capacity. The concept of capital fund provides such an index. Since value is the common denominator between different economic forms, the capital fund is the summation of values of individual capital goods. The value of an economic service potential is secured by capitalization of its yield. Under ideal stationary conditions this would be identical with its historical cost in sacrificed consumption.

Sixth, capital is perpetually maintained. Somewhat paradoxically, the productivity theorists hold that no resources are permanent but that capital is perpetual. The apparent paradox is resolved by explanation of the concept of perpetual maintenance. Capital goods are maintained in the sense that accountants charge to operations a portion of the expiration of the cost of the capital instrument. The yield from a capital instrument is calculated net of the cost of the capital goods used up. Capital goods are not consumed in the production process since replacement is provided for in entrepreneurial planning. The planning period or horizon of expectations does not coincide with the physical or economic life of the capital goods used in the productive operations. Typically, therefore, consumption of capital good types is not envisaged in *ex ante* formulations.

As a corollary, maintenance expenditure is not distinguished from replacement expenditure. Replacement expenditure is usually said to be a function of the service life of the capital good, while maintenance expenditure is not. For example, depreciation charges on a machine may be prorated over an expected five-year life, but a broken fan belt must be repaired or replaced at once. Typically, maintenance is the absolute condition of the functioning of the capital good and therefore represents continuous replacement. This is seen clearly in the case of capital goods which are continuously maintained by replacement of individual parts with complete replacement never taking place.

While capital goods are perpetually maintained in the sense that their yield provides for replacement, capital as value may be considered to be perpetual in that the total quantity of capital in a society normally is increasing. Thus not only are individual units of capital goods replaced but new increments are added. "The only exceptions have to do with times and places in which economic relations are demoralized by crisis conditions, and in which there is no approximately free market for loans or for capital goods" [(6) pp. 457-458].

The productivity theory of capital seems to regard capital goods from the standpoint of fixed capital. The Austrians emphasize capital as a circulating capital with maintenance dependent upon decisions made at each turnover. Both views have some validity and usefulness. Even fixed capital may be regarded as circulating, since annual depreciation charges result in conversion of specific fixed assets into other forms of assets unless expenditures are made to "maintain" the specific assets. Further, there are no a priori reasons why a society's capital fund should grow monotonically. While examples of capital consumption by economic societies appear to be exceptional, within an economy capital consumption regularly takes place in firms and industries. The significance for capital theory of investment of funds reserved by depreciation charges is uncertain since characteristically a firm has multiple sources of funds and makes disposition of them among a multiple of applications. It is not possible to relate all uses to associated sources of funds. While it is admissible to regard capital as perpetual since maintenance and replacement may be continuously provided for, it should also be acknowledged that other alternatives may be adopted by decision makers.

Knight acknowledges that capital consumption by an economic society is possible, but observes that historically it has occurred only under abnormal conditions of relatively short duration. He indicates that the economic theory of a retrograde economy would be terribly complex and involve consideration of relationships which to date have been little explored by economists.

Six basic ingredients of the productivity concept of capital have been described. The further significance of these elements may be indicated by consideration of a major derivative doctrine. This is the issue of limits to the use of capital.

V. *The Long-Run Supply Function of Capital and Diminishing Returns*

Professor Knight has made some interesting observations on the nature of the supply function of capital in the long run. In the long-run view, independent of particular definitions, savings are equal to investments, and annual savings, therefore, represent additions to the stock of capital. Therefore, savings may be taken as a measure of the time rate of capital accumulation. In the short run, the quantity of savings per year can be derived from the consumption function, and hence the quantity of savings may be taken as a function of the current level of income, probably influenced to some extent by the level of the interest rate structure and by previous levels of savings. The supply of savings or the rate of capital growth over the long run might be taken as a cumulation of this type of behavior in short periods.

However, Knight maintains that there is no true supply curve for capital; that there is only a growth curve [(6) p. 637. Cf. also R. F. Harrod, *Towards a Dynamic Economics* (1948), Lecture 2, "The Supply of Saving."] In one sense, this is equivalent to saying that the quantity of savings in the long run is institutionally determined. We cannot graph the quantity of saving over a long period of time in relation to some determining functional variables. Knight suggests that the quantity of saving in the long run is influenced by sociological and institutional factors such as desire for security, desire for power, the desire to achieve a certain level of living standards, the desire for social emulation, and the rate and level of new inventions.

One aspect of Knight's position, therefore, is that the rate of addition to the stock of capital per time period is an autonomous variable. Furthermore, he insists that the mode of capital accumulation, which society has achieved historically with only temporary interruptions, indicates that demand and supply functions of capital cannot be drawn to indicate an intersection at which an equilibrium price will be determined. In the usual analysis of commodity supply and demand relationships, the equilibrium price is said to clear the market or with relatively small additions or deductions from stocks. However, the situation with respect to capital accumulation is distinctly different, since the price established results in a continuous, long-run tendency to add to the stocks of capital goods. Consequently, a long-run supply curve of capital cannot be drawn so as to depict a long-run equilibrium situation; i.e., one in which further accumulation would not take place. Knight suggests that all we know is that from one short period to another we have a different stock of capital. We can draw short-run supply curves of capital which are simply vertical supply lines. The shape and position of the long-run supply of capital cannot be indicated.

A crucial issue arises in this connection. Knight has suggested that there is no basis for the presumption of a tendency to establish equilibrium at all [(6) p. 618]. Others, in contrast, have held that there is a tendency for capital to accumulate to the point where the price (interest rate) would fall to zero. There would be no inducement for further accumulations of capital (no net investment), the stock of capital would then be fixed, and one of the attributes of a stationary economy would have been established.) This involves a consideration of the nature and likely extent of diminishing returns.

Knight describes the causes of diminishing returns:

> On the one hand, there are qualities, in the natural environment and in human beings, which are not augmentable, so that new investment will involve applying those which are augmentable in increased proportion to those which are not. On the other hand, there are "inferior" things, materials or "situations" in both categories that are available for use, so that new investment involves recourse to lower grades (lower "quality" in the meaning of grade)" [(8) pp. 35-36].

Diminishing returns are said to arise from two sources. Variable agents are applied to fixed agents resulting in nonproportional returns. As additional agents are brought into use, resort must be had to lower grades resulting in less than proportional returns from a series of inputs. Since the economic basis for distinguishing differences in quality and in kind records only differences in degree, the second cited source of diminishing returns appears to signify differing elasticities of supply. Hence the second is really an aspect of the first and not distinct from it.

While it is generally acknowledged that diminishing returns exist, disagreement has arisen on judgments as the extent to which diminishing returns may take place with capital accumulation. Knight denies the possibility of diminishing returns resulting from the demand side:

> The possibility of progressive satiation of the "want" for the single good, as its supply increases, does not enter into the rate of return; for, any change which may occur in the relation between intensity of satisfaction and time rate of physical consumption enters in the same way into both the numerator and the denominator of the ratio which defines this rate [(8) p. 32].

In the expression which relates costs incurred over time to net revenues earned over time, the right-hand side of the equation—the dollar value of revenues—declines as markets are cleared of goods only at lower prices. But by the same degree costs on the left-hand side of the equation are lowered. This must be true because the costs represent alternative costs in terms of temporarily foregone consumptions over some period of time. The value of the consumption foregone will reflect the lower prices for goods sold. This denies therefore the likelihood of secular stagnation from influences operating on the demand side.

With regard to diminishing returns on the cost side due to the law of nonproportional returns and limitation of factor agents Knight specifies that there is a definite limit to the extent to which this will occur. He presents the view with considerable emphasis:

> In particular it is certain, *a priori*, that with other things held constant—meaning, especially, if there are no new inventions or other changes opening up new demand for capital—the rate could never fall to zero. This is possible only if society as a whole approaches a state of complete satiation in which there would be no economic values and all economic categories would lose meaning. For it is certainly inadmissible to assume that society could reach a state in which no additional capital could be employed to any advantage whatever, before all other factors or their services became free goods [(8) pp. 623-624].

This position holds, therefore, that even under the assumptions of a stationary economy the interest rate could not fall to zero. Opposite views have been expressed, however. Keynes, for example, observed that an economic society could bring the marginal efficiency of investment down to zero in one generation.[11] Domar suggests that the possibilities of capital deepening are limited.[12]

Lange has stated the case for a zero rate of interest in greatest detail in his article, "The Place of Interest in the Theory of Production." He defines the marginal net productivity of capital as the marginal gross value productivity of indirect goods less the marginal gross value productivity of direct goods. He urges that when the marginal value of productivity of indirect goods is equal to the marginal value of productivity of direct goods, the marginal net productivity of indirect goods or capital must therefore be zero [(10) pp. 160-164; 189-192].

David McCord Wright has given an extended analysis attempting to show that the rate of interest could be zero in the absence of free goods. He suggests that without changes in wants, resources, or technology a point will be reached when the productivity of additional capital goods will not exceed the opportunity cost of the agents which must be shifted to create the additional capital goods [(14) pp. 331-358].

In part the disagreement arises from failure to fully distinguish between short-run and long-run situations. Knight has repeatedly acknowledged that there may be temporary gluts in the quantity of investment that has been undertaken and that frictions and bad planning, lack of foresight, may result in zero net productivity of additional investment temporarily.[18] There is still an area of uncertainty and disagreement over the likely frequency of the occurrence of such situations and the extent of their probable duration. However, it apparently requires emphasis that in many places Knight recognizes the business cycle problem with regard to temporary situations in which the net yield from investment, reinforced by pessimistic anticipations, may be low or negative. But he observes that the possible rate of absorption of new capital goods can never be a limiting factor on long-run investment, abstracting from friction in the sense of inaccurate planning [(6) p. 639].

---

[11] *General Theory*, pp. 220-221.

[12] "The Problem of Capital Accumulation," *American Economic Review*, 1948, p. 777.

It appears that in all of his expositions of why it is not likely that a zero rate of interest would be reached, Knight departs from the assumptions of a stationary state. For example, in one place, he suggests that a fall in the rate of interest in consequence of accumulation of capital would take place at a very slow rate. He supports this by empirical evidence. If we take the elasticity of demand for capital as unity, the total amount of capital as five times the annual income, and savings as a fifth of annual income, it follows that it would require twenty-five years to double the total investment. He suggests that the interest rate would fall in a logarithmic relation, being at any time equal to half its value twenty-five years earlier in time and double what it would be twenty-five years later [(6) p. 623]. But resort to empirical evidence of this kind is implicitly assuming a model in which the conditions of a stationary economy are far from being represented. The model is that of an economy which historically has exhibited vigorous growth characteristics.

In his nonempirical discussion of the influence of accumulation on the rate of interest, Knight considers investment in three alternative ways. First, investing to change wants involves dealing with the imponderable. He concludes that very little can be said with certainty as to the possibility of diminishing returns from investing in wants. Second, there is a higher degree of probability that investment in attempting to produce additional resources would be subject to diminishing returns because of relatively unequal augmentability of certain qualities. Third, with regard to investment in new knowledge, Knight surmises that even this may be subject to diminishing returns. However, while it may be subject to diminishing returns it is much less likely that the rate of interest could fall to zero as a consequence of investment in new knowledge. For example, given a stationary state in which the opportunity cost of making any new investments has become equal to the productivity of the new investment, if we relax the restraint of unavailability of investment in new knowledge, it is clearly perceived that one can always invest in less expensive techniques to produce some goods. The marginal net efficiency of investment consequently would be above zero.

---

[18] *Ethics of Competition*, p. 260; "The Business Cycle, Interest, and Money: A Methodological Approach," *Review of Economic Statistics*, May, 1941, pp. 7, 8, 9, 11, 13.

Further, even in a stationary state, regardless of the quantities of different types of capital instruments, short of their being free goods, a positive interest rate would be required to allocate resources between different capital uses.

Another basis for doubting the likelihood of a zero rate of interest under the assumptions of a stationary state is denied to Knight because of his rejection of any influence on the supply side in interest rate determination. This is a consequence of his belief that the demand for capital function is virtually horizontal and the supply function virtually vertical. It is possible that time preference (here used to signify only that the time pattern of a person's income may not coincide with the time pattern of consumption he desires) would assert an influence on the supply side to prevent the interest rate from falling to zero under the conditions postulated by Wright and others. In any event the conclusion depends upon the shapes of the long-run demand (for capital) and supply functions on which little illumination is provided by available empirical data.

VI. *In Perspective*

Some major tendencies appear to emerge from the historical controversies on capital theory. There appears to be general agreement that there are neither original nor permanent classes of factors. Certain qualities in particular productive agents are, however, relatively nonaugmentable. While factor scarcities may develop for short periods limitational factors are not likely to exist over long periods. Elasticities of substitution may be low during short periods but are higher for longer periods. Unequal elasticities of supply are a sufficient condition for diminishing returns.

The average investment period as a measure of absolute quantity of capital is an invalid doctrine. The derived concept—the time structure of production—as a reflection of a hierarchy of capital quantity used in distinguishable stages of production is equally indefensible. The time structure notion is perhaps suggestive of two more useful ideas: differential factor mobility and different production coefficients in different industries.

For purposes of comparing yields from alternative investments it is convenient to regard capital as perpetual and to represent returns by perpetual streams. However, the view of all capital goods as circulating capital also has useful analytical applications in studying the growth and "consumption" of particular capital entities within the total structure. One of the valuable implications of this emphasis is that it provides a necessary restraint on the probably excessive optimism reflected in the assumption that a society's capital fund necessarily grows. It suggests, *inter alia,* that an appropriate institutional environment is essential for a desired rate of continued capital growth.

There is agreement that historical changes in wants and technology are sufficient to assure continued capital accumulation at a positive return. Under the assumption of stationary conditions disagreement persists on whether there can exist a size of capital stock so large that the net yield from capital is zero in the absence of free goods. The resource allocation function of interest payments implies a positive rate. It appears that forces from the supply side would also operate to prevent the existence of a zero rate of interest.

Although this paper could not hope to reconcile to everyone's satisfaction the long standing controversies in the area of capital theory, it has sketched the broad outlines of the major issues. It has sought to indicate both elements of usefulness and invalidity in the opposing viewpoints. Capital theory will continue to be an important area for study since it is central for any theory of the economic process.

CAPITAL THEORY AND PROGRESSIVE EQUILIBRIUM

By FRANK E. NORTON JR.[1]
University of California at Los Angeles

The purpose of this paper is to consider the implied capital theory underlying some recent discussions of aggregative dynamic equilibrium. This notion is concerned with the maintenance of sustained full employment in a progressive economy. Its foundations are essentially based upon modern business cycle and employment theory and it may be considered to be a further development of those theories. Most formulations, however, constitute a certain type of secular theory which stands to a large degree independent of any theory of cyclical fluctuations. We shall be concerned with the implicit postulates which such a secular theory contains with regard to the theory of capital.

Looking back over the developments in employment theory of the past decade and a half, most economists would probably concur in the view that our understanding of the determinants of aggregate demand has been greatly improved. The impact of Keynesian economics on our thinking has left us in a better position to deal with policy formulation. Today there appears to be a substantial consensus as to what economic policies should be applied when aggregate demand becomes temporarily deficient or excessive in private enterprise economies.[2] Fifteen years ago the situation was certainly quite different. Unfortunately the area of agreement becomes much more constrained when longer-run considerations are involved. The fact of the matter is that the consensus relates to policies largely of a short-run character which are based primarily on the modern theory of employment which also applies to the short run; i.e., the modern theory of employment. How the forces of long-run economic development relate to the theory of employment remains extremely controversial, as can be seen in the literature dealing with the secular stagnation thesis and the concept of underemployment equilibrium. Hence generally accepted short-run policies may be incompatible with the achievement of longer-run objectives. Few economists will doubt that we need to know more about the long-run implications of our short-run policies. This can be achieved only if we have a broader framework than is provided by the contemporary theory of employment. The concepts to be considered here are intended to make some contribution toward this end.

---

[1] The author wishes to acknowledge indebtedness to J. Fred Weston for helpful criticism of this paper.

[2] Cf. "The Problem of Economic Instability, A Committee Report," *American Economic Review*, 1950, pp. 505-538.

The Theory of Progressive Equilibrium

The study of the conditions of aggregative dynamic equilibrium constitutes an application of the neo-Wicksellian saving-investment framework to the problem of long-run expectational equilibrium in an expanding economy. Interest in this problem stems most directly from Harrod's ingenious "Essay in Dynamic Theory," which appeared in the *Economic Journal* in 1939, pages 14-33. Further contributions were made by Fellner[3] and Domar.[4] Subsequently, Harrod elaborated on his original thesis in his book, *Towards a Dynamic Economics.* Finally, Hicks has recently addressed a book, *A Contribution to the Theory of the Trade Cycle,* to closely related problems. Paul A. Samuelson made a more or less indirect contribution in his article, "Interactions between the Multiplier Analysis and Principle of Acceleration," in the *Review of Economic Statistics* in 1939, pages 75-78.

In his "Essay" in 1939 (pages 16 and 17), Harrod introduced the concept of a "warranted rate of income growth" defined in such a way as to maintain "on balance" expectational equilibrium among investors. Once established, such a rate of income growth is supposed to be self-maintaining, since profit expectations in the aggregate would be consistently justified over time and would lead to the requisite investment behavior to maintain the rate of income growth. Domar subsequently elaborated on substantially the same theme in his article, "Capital Expansion, Rate of Growth, and Employment" (*op. cit.*), but he was primarily concerned with the conditions for a steady advance while Harrod placed more emphasis on the sources of potential disturbance to such an advance. Domar, however, would keep the expectations of investors on the correct "time-track" by a government guarantee of the requisite rate of income growth. Of course, it is assumed that real resource scarcities do not preclude the maintenance of such a growth rate. This involves the natural rate of income growth, g_n, which is discussed subsequently.

In order to fix our analysis of these contributions, let us specify the following dynamic model system which is the essential framework underlying their discussions.

Let K = real capital stock
S = real net saving
C = real consumption

---

[3] William Fellner, ***Monetary Policies and Full Employment*** (Berkeley and Los Angeles: University of California Press, 1946), particularly Ch. II.

[4] Evsey D. Domar, "Capital Expansion, Rate of Growth, and Employment," ***Econometrica,*** 1946, pp. 137-147; "Expansion and Employment," ***American Economic Review,*** 1947, pp. 34-55; "The Problem of Capital Accumulation," ***ibid.,*** 1948, pp. 777-794.

$I = \mathbf{K} =$ real net investment or net capital formation
$Y =$ real net income or net output
$\mathbf{Y} =$ time-rate of change in real net income or net output
$\alpha = dC/dY =$ the marginal and average propensity to consume
$\gamma = dS/dY = 1 - \alpha =$ the marginal and average propensity to save
$\beta = dI/d\mathbf{Y} =$ the marginal and average capital coefficient

If all the economic variables involved are simultaneous with respect to time,[5] the economic model is

$$(1)\quad S = \gamma Y$$
$$(2)\quad I = \beta \mathbf{Y}$$
$$(3)\quad \gamma Y = \beta \mathbf{Y}$$

This model consists of two structural relations; namely, the saving function (1), or its reciprocal the consumption function, $C = \alpha\ Y$, and the investment function (2). The equilibrium condition is: saving equals investment (3).

It will be noted that the form of the saving function is such that it posseses a zero intercept. This is merely assumed for purposes of simplification but it may be pointed out that single equation estimates of the "long-run historical consumption function" based on economic time series data result in empirical consumption-income relations where this is approximately the case.[6] Also on a priori grounds S should equal zero when Y equals zero in long-run equilibrium. Thus, the average and marginal propensities to save are equal for all levels of income.

The investment function here is, of course, the acceleration principle. We shall have more to say about this presently.

γ and β are the structural parameters[7] of the model and by a transformation of the equilibrium condition (3) we obtain

$$(4)\quad g_w = \frac{\mathbf{Y}}{Y} = \frac{\gamma}{\beta}$$

---

[5] Harrod defines time lags into his system but actually this is an accidental property of his formulation. The notion of expectational equilibrium is the fundamental matter.

[6] On the problem of the long-run historical consumption function see particularly, Fellner, *op. cit.*, especially Appendix I, "Empirical Consumption Functions," pp. 239-240; James S. Duesenberry, "Income-Consumption Relations and Their Implications," *Income, Employment and Public Policy* (New York: W. W. Norton & Company, Inc., 1948), pp. 54-82; Franco Modigliani, "Fluctuations in the Saving-Income Ratio: A Problem in Economic Forecasting," *Studies in Income and Wealth* (New York: National Bureau of Economic Research, 1949), pp. 371-441; James S. Duesenberry, *Income, Saving, and the Theory of Consumer Behavior* (Cambridge: Harvard University Press, 1949). See the latter work for a complete bibliography.

[7] Only formally. Obviously, this is a simplified macroeconomic model which purports to focus attention on certain relations which are considered strategic for the purposes at hand. γ and β in a broader context are functions of other variables; e.g., interest rates, relative factor prices, income distribution, the stock of liquid assets and its distribution. These matters will be given some attention later.

where g_w = the warranted rate of income growth. Alternative forms of the equation are: $g_w \beta = \gamma$, or $g_w \beta = 1 - \alpha$. This warranted rate of income growth thus turns out to be a constant geometric rate of income growth. The solution of the differential equation is: $Y = e^{\gamma/\beta t} Y_0$. It is also evident that consumption and investment must also grow, if equilibrium is to be maintained, at the same rate as income, given these relations.

The fact should be stressed that g_w is an expectational equilibrium rate of income and investment growth where realized income equals expected income and planned saving equals planned investment continuously over time. Just as in the theory of employment, where the income level equates *ex ante* saving to *ex ante* investment, so here the rate of income growth, g_w, equates them, given the saving and investment functions. The difference in the present case is occasioned by the fact that the acceleration principle serves as a dynamic investment function. As is well known, net investment is considered to be autonomous or an increasing function of the income level in the simplified theory of employment and income determination. Of course, the *ex post* magnitudes of saving and investment are definitionally identical in the aggregate. This is so regardless of the income level or its rate of growth.

It should be remarked in passing that this warranted rate of income growth, g_w, does not possess the required stability characteristics. Thus any disturbance causing the rate of income growth to deviate from g_w would lead to a divergence of the system either in a cumulative expansion (provided resource scarcities are not encountered) or contraction. This aspect of the analysis is beyond the scope of our interest here but it may be said that Hicks has given a certain "limited stability" to the growth rate by the introduction of appropriate time lags.[8] Throughout our discussion we will be concerned primarily with the secular aspects of this type of theory rather than its possible use as a theory of cyclical fluctuations.

A Specialized Capital Theory: The Acceleration Principle

Let us now examine the investment function (2) to see what type of a theory of capital is involved. The time-integral of this function gives the capital demand function

$$K = \beta Y \tag{5}$$

In order to untangle some of the difficulties involved here, it may be fruitful to assume initially that the economy possesses the properties of a single product firm. This will allow us to define away the aggregation problem. We will therefore make the following assumptions temporarily: (1) a closed one-product economy where this single product may be used either for consumption or investment; (2) a given linear homogeneous production function involving only capital and labor services as inputs (probably the most "neutral" of the assumptions one might adopt). Since the capital and labor services flowing per unit of time from the real capital stock and labor force, respectively, may be assumed to be proportional to the size of these two resources at a given point in time, we may consider these resources to enter the production function directly as inputs.

---

[8] Hicks, *op. cit.*, Mathematical Appendix, Appendix to Ch. V, pp. 182-183.

If one uses relation (5) as the basis for the investment function (2), it implies either that the technical coefficients of production are fixed and independent of the price system or that the interest rate and relative factor prices do not change as real income expands. The latter interpretation would mean that the relative elasticities of supply of the capital and labor services over time were equal. Both interpretations assume that the conditions of profitability are fulfilled. "Real analysis" of this type must imply that these conditions are fulfilled. Otherwise, relation (2) cannot be identified as a demand function for investment.

Under either of the above situations, the acceleration principle becomes an unequivocal long-run theory of induced investment. It determines the optimal net capital formation in keeping with a rise in the real income level. Thus, given an expected time-rate of increase in real output, Y, and given the *ex ante* marginal capital coefficient, β, the planned induced investment, I, is equal to βY. Consequently, the acceleration principle provides a theory of induced investment in the sense that it explains that part of investment at a given time which is devoted to capital widening. That investment which constitutes capital deepening has to be explained on other grounds.[9] Of course, capital formation concerned with raising the capital intensity per unit of real output is the type emphasized by the time-period theories of capital.

It may be helpful to consider at this point the concept of the natural rate of income growth, g_n, introduced by Harrod. This most elusive character is much like Elwood P. Dowd's rabbit, Harvey. Although it appears to be a constant companion of some authors,[10] many of us are never able to see it clearly. The natural rate of income growth, g_n, is apparently defined as the potential full employment rate of income growth of the economy. It is determined by the autonomous rate of labor force growth on the one hand (or more precisely, by the rate of labor service growth which would take into account changes in man-hour input as a consequence of the secular reduction in the length of the work week) and the rate of laborsaving innovation on the other. The latter means that technical progress embodied in capital formation tends to reduce the size of the labor coefficient; i.e., the labor service input per unit of output. However, we have to this point assumed the production function to be given; consequently only the rate of labor force growth enters into the determination of g_n. In our rigid model, it is possible to give a very determinate meaning to the natural rate of income growth, g_n: it is simply the autonomous rate of labor force growth.

---

[9] Cf. R. G. Hawtrey, *Capital and Employment* (London: Longmans, Green, 1937). Capital widening is defined as the situation where the capital coefficient, β, remains unchanged as real output rises. Capital deepening (shallowing) is defined as an increase (decrease) in β.

[10] The same idea appears in Domar's writings although his formulation is slightly different. Cf. Domar, "Capital Expansion, Rate of Growth, and Employment," *op. cit.*, pp. 139-140, 145-147; "Expansion and Employment," *op. cit.*, pp. 39-40, 43-45, 49, 55. This is one of the reasons for his distinction between his parameters s and σ.

The discrepancy which is given star billing in these theories of secular development is that between the warranted rate of income growth, g_w, and the natural rate of income growth, g_n. Chronic unemployment occurs when $g_n < g_w$. Under these circumstances the economic system cannot expand fast enough in order that expectational equilibrium can be maintained because it runs into a secular labor shortage. Since $g_n\beta < g_w\beta$ and $g_n\beta < \gamma$, there is a deficiency of planned induced investment to offset planned saving at a full employment rate of income growth. Now if the capital and labor coefficients are not rigidly fixed, i.e., the elasticity of substitution between capital and labor is greater than zero, a labor shortage of a truly secular sort should lead to some substitution of capital for labor. In other words, capital deepening might take place and ameliorate the difficulty by raising g_n relative to g_w (abstracting from any possible unfavorable income redistribution effects on γ via the elasticity of substitution between capital and labor). To the extent that this might take place in the secular long run, we need a broader theory of capital formation than that implied in the acceleration principle. We do not mean to imply, however, that whenever capital deepening is necessary to maintain a full employment rate of income growth in the real world that it will automatically be brought about by a fall in the interest rate, etc. Our position on these matters will become clearer below.

Technical Progress and Autonomous Investment

Relaxing the assumption of a given production function we may consider the impact of innovations in techniques of production and organization. The acceleration principle can handle in a formal way the case where technical progress does not change the marginal capital coefficient, β. However, we feel that at this point the analysis begins to break down. Harrod defines innovations as capital using, capital saving, or capital neutral, according to whether they raise, lower, or leave unchanged, respectively, the marginal capital coefficient, β.[11] On this definition of innovations, a given innovation may be both capital saving and labor saving. It is probably the most appropriate classification of innovations from the standpoint of the capital theory underlying the acceleration principle. However, unlike other well-known classifications of innovations, it does not place them in mutually exclusive "economic boxes." Consequently, if innovations tend to be capital neutral, i.e., leave the marginal productivity of investment unchanged, presumably one could still determine planned induced investment, I, by multiplying the relatively stable *ex ante* marginal capital coefficient, β, by the expected time rate of increase in real output, $\dot{Y}$. But at the same time that these technical innovations are capital neutral, they are laborsaving, else they would not be innovations. Actually the meaning of the acceleration principle becomes attenuated. Part of the planned investment is really no longer of the pure induced variety; it does not depend on a rise in real output for its justification. Cost saving investment is net resource releasing—in the present case laborsaving—and is profitable even at a given output level. (An individual firm may find it profitable to invest in order to lower its cost function.) One may formally take account of this circumstance and call such investment autonomous, A. (Harrod in his last exposition expresses autonomous investment as a constant fraction of the income level. Although the ratio of autonomous investment to the income level must remain constant if a steady advance is to be maintained, we prefer to just express it as an aggregate variable lest Harrod's procedure suggest a behavior equation.) If we follow this procedure, the amended equilibrium saving-investment equation (3) of the above model system becomes

$$(6) \qquad \gamma Y = \beta \dot{Y} + A$$

which gives for the warranted rate of income growth (or alternatively: $g_w\beta = \gamma - A/Y$),

$$(7) \qquad g_w = \frac{\dot{Y}}{Y} = \frac{1}{\beta}\left\{\gamma - \frac{A}{Y}\right\}$$

Thus the net effect of this type of autonomous investment from the standpoint of income generation is merely like that of any other offset to planned saving; while from the standpoint of labor productivity it tends to increase the natural rate of income growth, g_n; i.e., it increases the "effective" rate of growth of labor services to the economy.[12] Relation (7) indicates that in order for expectational equilibrium to be maintained, autonomous investment, A, must also grow at a rate equal to g_w. From the standpoint of the rate of growth, so-called "autonomous" investment is no different than induced investment. Consequently, its introduction constitutes merely a formal adjustment so far as steady advance is concerned. Unfortunately, there will tend to be a secular interdependence between A and the marginal capital coefficient, β.

---

[11] Harrod, *Towards a Dynamic Economics*, pp. 22-27.

The reader's attention is called to the purely formal nature of autonomous investment in Hicks's model system. (Cf. Hicks, *op. cit.*, especially pages 59-62.) Domar does not formally distinguish between autonomous and induced investment but he recognizes the difference in his literal discussion. This procedure is probably followed because he is mainly concerned with the steady growth rate and he wishes to try to measure it empirically from *ex post* data.

Where capital using or capital saving innovations are involved, the acceleration principle cannot be used as an investment function. The capital coefficient, β, may become a function of time and the model will have to be "complicated." This is also true in the case without technical progress where the long-run elasticity of substitution between capital and labor is greater than zero and the economy is confronted with a secular labor shortage. β is no longer a parameter but a function of other variables.

Returning to the concept of the natural rate of income growth, g_n, it should be emphasized that it becomes a very difficult concept when technical progress is considered. Under these circumstances one will find it to be higher than the autonomous rate of labor force growth taken by itself. However, even with capital neutral innovations we do not know the rate of laborsaving involved until we know the rate of net capital formation. The degree to which laborsaving innovations reduce the labor coefficient is not a function of some proxy variable called "time" but is intimately related to the rate of investment growth. In other words, technical progress is embodied in capital formation. Just any offset to planned saving will not be sufficient. This constitutes a truth that we will do well never to overlook. For instance, projecting labor productivity trends into the future is very dangerous when the ratio of government to private national product must be continually increased from a secular standpoint to maintain full employment. Nevertheless, there is probably one conclusion that may be made in regard to the natural rate of income growth, g_n, under conditions of technical progress: it is very unlikely that $g_n < g_w$. Hicks does not even discuss the possibility that $g_n < g_w$ but makes merely a few remarks in a footnote about a constant or declining population. (Cf. *op. cit.*, page 96, footnote 1.)

---

[12] *Ibid.*, pp. 87-100; also Lecture 1 *passim.*

Stern[13] and Fellner[14] have attempted to make empirical estimates of the aggregate capital coefficient, β, for the American economy. These estimates are based upon economic time series data relating to net capital formation and national income. Both find empirical capital-income relations which give an approximately constant marginal capital coefficient, β, for the period 1879-1929. Unfortunately, the numerical values obtained are merely *ex post* resultants of complicated cyclical processes. In other words, what one gets is an estimate that is consistent with the average propensity to save rather than an approximation to some aggregate *ex ante* capital coefficient for the economy. This is the same old difficulty of trying to estimate both saving and investment functions from the same set of statistical data by methods of single equation estimation. Any such estimates, of course, have to consider autonomous and induced investment as an undifferentiated whole. Analytically it may be very important to make the distinction because of the difference between the two types of investment on motivational grounds. Nevertheless, the writer feels that the estimates of capital coefficients for specific industries that are being made by Leontief may be more meaningful. The latter may have some predictive value under certain conditions. The present writer has undertaken some similar estimates. Despite all the limitations involved, the results are certainly very suggestive in a number of instances.

The Aggregation Problem: Capital Formation and Shifts in the Composition of Output

Turning to the aggregation problem and recognizing that the economy is not simply a huge firm from the standpoint of investment behavior, one is inclined to have the feeling that this type of macroeconomic secular theory is apt to be very misleading from the standpoint of the capital formation process. The aggregative character of such theories is likely to be more serious than in the case of the short-run theory of employment. Income generation via the multiplier process is quite a generalized phenomenon as compared to investment. The latter represents usually a specific increase in the productive plant capacity of some firm in a particular industry; while the income generating effects of such investment will be propagated far and wide throughout the economic system.[15] Every industry has its own secular growth, time trend[16] and perhaps income elasticity of demand. The capital coefficients for different industries and for different firms[17] within a given industry will vary to a substantial degree. Consequently, a specific rate of income growth for the economy as a whole may be associated with widely varying amounts of induced investment. The set of β parameters for the economy will change over time due to such things as technical innovations, relative factor price changes including interest rates, changes in resources, changes in the degree of utilization, changes in the ratio of product to factor prices, and changes in the degree of uncertainty.

---

[13] E. H. Stern, "Capital Requirements in Progressive Economies," *Economica*, 1945, pp. 163-171.

[14] Fellner, *op. cit.*, Table 3, p. 80.

[15] Cf. Evsey D. Domar, "Investment, Losses, and Monopolies," *Income, Employment and Public Policy* (New York: W. W. Norton & Comany, Inc., 1948), p. 50.

In some degree, traditional business cycle analysis deals with many aspects of the dynamic processes leading to capital formation in the course of economic development.[18] This is particularly true of those patterns relating to microdynamic phenomena. Shifts in the composition of aggregate output constitute one of the major characteristics of the organic growth of progressive economies.[19] No single theory can explain what causes the "first" shift (for example, the innovation model of the late Professor Schumpeter) but accepting the empirical postulate that shifts will occur as an economy grows, one can easily explain how such shifts can lead to changes in aggregate demand. A relative shift from product A to product B will change the demand for capital goods.[20] This is likely to be true if the shift away from product A was caused by an increased relative demand for product B. The investment in product area B will probably outweigh that in product area A. In a specific year, the maximum disinvestment that could take place in A would be equal to the depreciation charge in that area while the entire capital stock in B must be formed in a relatively short period. The one important qualification relates to the relative magnitude of the capital coefficients applying to the two products. If the ratio of the capital coefficient in A to the capital coefficient in B were very great, this might swamp the process mentioned. This possibility is not very likely. The same argument may also be applied to geographic shifts in the location of economic activity. In this case area A and area B refer to geographic regions. Provided there are a sufficient number of such shifts, generalized expansion may result or a contraction may be halted in the economy as a whole. Moreover, the psychological repercussions underlying the Wicksellian cumulative process will tend to reinforce such an initial process.[21] This view of the capital formation process accompanying economic development leads to the conclusion that the secular trend and the cyclical fluctuations of an economy are inseparable and that they are all part and parcel of the same thing. Cyclical fluctuations do not just take place about some moving equilibrium which is identified as the secular trend.

---

[16] Many industries follow a pattern of growth which is well described by a Gompertz function. If we apply the acceleration principle to a specific industry the growth of which is so characterized, it is easy to see what this must mean to industries selling capital goods to the industry. Cf. Simon Kuznets, *Secular Movements in Production and Prices* (Boston: Houghton Mifflin Company, 1930).

[17] In the relation $I = \Phi (Y, \beta)$, β stands for the net effect of all the other determinants of the inducement to invest besides y.

[18] See Gottfried Haberler, *Prosperity and Depression,* 3rd ed. (Geneva: League of Nations, 1941), especially Part II, pp. 257-455.

[19] Cf. W. Fellner, *op. cit.,* Table 5, pp. 126-127 and Appendix II, Table 8, pp. 242-243.

[20] Haberler, *op. cit.,* pp. 99-100.

Conclusions

(In this paper we have examined the notion of aggregative dynamic equilibrium employing the acceleration principle as a dynamic investment function. This theory has been used to support the view that a private enterprise economy may be confronted with chronic unemployment. The conditions under which this is true are supposed to be fulfilled when the natural rate of income growth, g_n, is less than the warranted rate of income growth, g_w. We have attempted to show that this conclusion rests on the meaningfulness of a very specialized type of capital theory; namely, the postulates underlying the principle of acceleration.) This variant of capital theory is unable to deal with the processes stressed by the Austrian capital theories: changes in the degree of capital intensity per unit of output. In the long run, substitution effects as well as scale effects should be possible particularly when capital formation is accompanied by technical progress.

Even in the case where $g_n \geq g_w$, this specialized capital theory used as a structural relation in the dynamic model system we have been discussing is quite inadequate for a "progressive equilibrium" theory. This is true, not only for the above mentioned reasons, but also because such a view of the capital formation process is unable to deal with an important aspect of economic development. We refer to changes in the composition of output for whatever reason. One cannot say that if income grows at a certain rate, a certain aggregate amount of investment will be induced, provided we know the value of the marginal capital coefficient, β. Macroeconomics is very precarious when put to such a use.

The essence of the problem is this: the secular long-run notion is a "clock time" period rather than an analytical period. It does not have independent existence from the short-run cyclical fluctuations experienced by private enterprise economies. Thus, no long-run capital theory of the traditional sort—least of all that implied by the acceleration principle—can serve as a building block in a framework concerned with sustained full employment in a progressive economy. We need an entirely different type of investment theory—one concerned with uncertainty and liquidity among other things.[22] This means a substantial difference as to where we look for the causes of protracted depressions.

---

[21] Fellner, *op. cit.*, especially Ch. IV.

In conclusion one may say that one of the important contributions of the recent discussions of aggregate dynamic equilibrium is their emphasis on the necessity for continuously increasing aggregate net investment if we are to maintain full employment and economic progress. If we can avoid great economic instability via the generally agreed upon fiscal and monetary policies, the degree of uncertainty associated with investment decisions will be substantially reduced and the aggregate rate of investment growth will probably be higher. Removal of certain institutional barriers to competition will also help as a long-run matter. Although the capital theory implied by the acceleration principle is quite inadequate as a basis for policy conclusions relating to whether we will experience chronic depression or not, the use of the acceleration principle on a microeconomic level may be fruitful. Future developments in the estimation of empirical capital coefficients in the context of the Leontief matrix should provide a somewhat more meaningful approach to the problems with which the concept of aggregative dynamic equilibrium is concerned.

[22] One of Professor Knight's greatest contributions to economic analysis, in the writer's opinion, is his concept of uncertainty. Decision making under true uncertainty is not different in degree as compared to that under certainty; it is different in kind. The full implications of this for the theory of investment and liquidity have only begun to be realized. As a matter of fact, it requires substantial revisions in most every field of economic theory.

THE VALUATION OF BUSINESS CAPITAL: AN ACCOUNTING ANALYSIS

By MAURICE MOONITZ
University of California

I

The inability of modern accounting procedures to provide a satisfactory measure of either business capital or business income is notorious. At least as long ago as 1927, a formidable attempt was made by F. Schmidt, writing in the *Zeitschrift für Betriebswirtschaft,* to erect the shortcomings of accounting into a major causative factor in business cycles. More recently, in 1948, the American Institute of Accountants organized a three-year research project under the title of the Study Group on Business Income, a project brought into being primarily as the result of the impact of a sharply rising price level on the validity of the results of the accounting process.

The nature of the dissatisfaction with these results may be stated briefly in the form of a series of charges or allegations; namely, (1) in a period of rising prices, reported profit is higher than "actual" profit; in some cases there may be no profit at all in the "real" sense; (2) in a period of falling prices, reported profit is lower than "actual" profit; reported losses are greater than "actual" losses, and, in some instances, there may be no actual loss at all; (3) in the case of strong or successful concerns, that is to say, those which continue to operate at a profit over a considerable span of time, recorded capital is understated, whether measured by total assets of the concern or by its net worth. In the case of weak or unsuccessful concerns, recorded capital is overstated.

An important correlative effect of these characteristics is a tendency for the reported rate of return to be exaggerated in a period of rising prices and to be understated in a period of falling prices. To the extent, then, that the results of the accounting process influence the decisions and actions of individuals and groups, the validity of modern accounting procedures is clearly of importance.

The present paper is primarily an exploration of the reasons for the results which accounting procedures do produce; in addition, certain suggestions for improvement of those procedures will be offered. The method employed will be that of accounting analysis; that is to say, (1) the focus of attention is an individual business unit, privately owned and operated, not the industry of which that unit is a part, nor the broad social aggregates which are the centers of attention in studies of national income and wealth; (2) attention is paid to both financial position and results of operations; that is to say, both "stocks" and "flows" are considered, and it is taken for granted that the two are intimately and irrevocably interrelated; (3) the effects of uncertainty occupy a central position in the analysis. An alternative way of expressing the same point is to emphasize the need for "objective" evidence in order to perform an accounting analysis.

It should be emphasized that this "accounting" analysis is not in conflict with economic analysis, in the sense of a conscious or deliberate antagonism. Historically, the two disciplines developed independently of each other; it is only relatively recently that the two fields have begun to coalesce or to merge. Both disciplines have had numerous problems in common, viewed from different perspectives. As a consequence there is some overlap and considerable difference of emphasis. It is the difference in emphasis, of course, which gives rise to an accounting analysis distinct in certain features from an economic analysis of the same problem.

II

In this part of the analysis, it is assumed that the price level is reasonably stable; later, this assumption will be dropped in order to assess the effects of a change in money as a standard of value.

A business concern is an entity formed for the purpose of obtaining revenues for its owners. This purpose is characteristically fulfilled through investment in types of assets which can be transformed into receipts from customers. We therefore have the existence of two factors; namely, (1) receipts to be had in the future, normally in the form of cash, occasionally in some other form; and (2) instruments or tools (assets) of various types, performing functions useful in obtaining those receipts.

To account for these fundamental factors in their pristine form is not difficult, requiring merely a classified record of cash receipts and disbursements. For the entire life of a business concern, we may then readily measure the profit or loss to its owners. This calculation requires but two steps: (1) Add up the total amounts received by the owners from the business during its entire life. In the case of a corporation, this will usually be the sum of all property dividends paid by the company, plus the amount of any final liquidating distribution. (2) From the sum of amounts received, deduct the amounts paid into or invested in the business by the owners during its entire life. If the remainder is positive, a profit has emerged; if negative, a loss has been sustained.

But the results of such a calculation are not of much significance except for business concerns with extremely short lives. In the usual case, the fact that profit determination by a comparison of money movements must await final liquidation of a business limits sharply the usefulness of this procedure. It has, however, the important advantage of finality and definiteness; in fact, it might even be asserted that it is the only method of profit computation that can conceivably be free of error.

For segments of the life of a business unit, however, the method sketched above leads to obvious absurdities. In the early years of the life of a business, for example, the owners make relatively heavy investments but receive little or nothing in the way of returns. We do not therefore conclude that they have sustained a loss. It is consequently necessary to have a procedure more sophisticated than a record limited to cash receipts and cash disbursements if we are to account adequately for a business unit. The case of practical importance, and therefore of theoretical interest, is that of the measurement of periodic profit for a going concern; that is to say, for a business unit which is expected to operate into the indefinite future.

In the face of certainty as to the future, an interesting result emerges —a result familiar and commonplace to economists. This is the logically correct result that periodic profit becomes identical with interest on the investment in the enterprise at the beginning of the period under scrutiny; furthermore, the rate of profit or of interest is the same, period after period. Under the capitalization principle, assets in total acquire a value equal to the discounted value of future receipts flowing to the enterprise from customers; debts, in total, acquire a value equal to the discounted value of the future disbursements which the concern must make to outsiders.

The significant corollary to be derived from these considerations is that all assets become receivables, since they all are merely the reflection of a stream of future receipts on the march toward the concern—receipts whose magnitude and time distribution are known.

In the world in which we live, all assets do not, of course, assume the form of receivables. But the preceding analysis is still of some importance because receivables do play an important part in financial position. Present-day accounting follows the capitalization principle in its practices with respect to purely financial transactions evidenced by formal documents, such as bonds, notes, mortgages, etc. In the case of all ordinary trade receivables and payables, the effects obtained by conventional accounting procedures approximate closely those which would follow from a literal capitalization of foreseeable future receipts or disbursements. Furthermore, as uncertainty decreases in other directions, accounting procedures exhibit a strong tendency to move closer to the use of direct valuation methods. For example, in connection with cost-plus-fixed-fee contracts, the recommended procedure today calls for the valuation and classification of the work done on these contracts as receivables rather than as components of work in process. (Cf. Research Bulletin No. 19 of the Committee on Accounting Procedure, American Institute of Accountants, New York, 1942.)

The assertion can therefore be hazarded that, in principle at any rate, there is nothing seriously wrong with accounting procedures bearing upon receivables and payables and the financial items generally, and that consequently, to that extent, the measurement of enterprise capital and profit is satisfactory. But the importance of this assertion is considerably lessened when we recognize that the items under discussion, namely, the bonds, mortgages, notes, etc., are precisely the items which are properly omitted in estimates of national wealth. Within a closed economic system, these evidences of a debtor-creditor relationship disappear as evidences of real wealth.

With respect to most of the operating assets—the ones usually classified as inventories and fixed assets—present-day accounting does not follow the capitalization principle, nor do the procedures employed approximate the results obtained by way of this principle. As a consequence, in this area is the locus of the alleged inadequacies of modern accounting procedures.

As indicated above, accounting procedure employs the capitalization principle, or a close approximation to it, with respect to receivables and payables. But the receivables and payables recognized in the records do not reflect the entire stream of cash receipts and outlays which the future will bring; they reflect only those which can be seen, which can be measured, and which have a high probability of fruition. This "horizon" of accounting may be distant; it may be near; it is rarely if ever distant enough in all directions to make the recorded value of enterprise capital as accurate as might be wished for. Thus, a business concern may hold as an asset a government bond maturing fifty years hence; the accounts will accordingly reflect a valuation of all the amounts promised by that instrument—the horizon is fifty years. The same concern may sell output on thirty-day terms; its receivables from customers will reflect uncollected amounts (future receipts) from sales made in the recent past. Even allowing for delays in payment by customers, the horizon here is not likely to be more than a year into the future. Not recognized at all as receivables in the accounts will be the succession of cash receipts to be collected from customers as a result of sales of the future; the time distribution and the magnitudes of these future receipts ordinarily are too uncertain to serve as a basis for recognition as part of existing assets or enterprise capital. A similar situation exists with respect to future cash outlays as part of existing liabilities.

Instead of these future receipts themselves, we find a record of the investment made in the tools for their generation or procurement. Raw materials, work in process, output awaiting sale, instrumental goods such as buildings, urban land, machinery, and equipment of all types represent the components of business capital which are includable in computations of aggregate wealth. These assets are not canceled in the process of summation of the total capital of the community.

This is the area in which accountants are forced to look backward and forward, at one and the same time. There is the desire, on the one hand, to remain within the protective embrace and presumed safety of cost, consistency, and conservatism—to cling to the record of past outlays or firm contractual commitments. There is, on the other hand, the knowledge that investments in materials and fixed assets are made in the expectation of future receipts from customers, that accordingly their value is somehow influenced by those expectations, and that in any event no investment in these items can ever be worth more than the capitalized value of the receipts they will help bring into the concern. As a consequence we are forced to make a prediction with respect to each of these assets; namely, that future receipts, attributable in part at least to the item in question, will be equal to or greater than the value assigned to that item.

This indefiniteness and uncertainty is sufficient reason for the practical rules of cost, consistency, and conservatism. And of these three, the most influential is conservatism. In accounting procedure, conservatism means the avoidance of overstatement of assets, even at the risk of gross understatement, the avoidance of understatement of debts, even at the risk of marked overstatement, and the avoidance of overstatement of proprietary equity and periodic profit. That these objectives are oftentimes inconsistent and perhaps even contradictory is widely recognized (and illustrated in the discussion to follow), but nevertheless conservatism prevails, at least as a rule of conduct. Historically this bias was undoubtedly useful in neutralizing the tendency of a businessman to overstate his profits and his net worth in order to make a better impression with creditors and absentee owners. At the present time, however, with income tax rates at high levels, the incentive is probably in the other direction; so that the traditional rules of conservatism may actually be dangerous. Recently, trade unions have made much of the level of corporate earnings in collective bargaining negotiations, adding more incentive for management to choose the smaller rather than the larger figure. In the interests of reasonably accurate profit determination, it might be well for accounting to discard its conservative bias altogether.

Under the influence of conservatism, a restricted definition of cost has been employed by accountants. In the first place, "cost" is ordinarily limited to cash outlays made or promised to acquire the item in question; in other words, the elements to be recognized must preferably be direct costs of the item, or related to it in some fairly obvious fashion; and these must be based upon objective, verifiable evidence. In an uncertain world, these are harsh terms, indeed. Immediately apparent, then, is the fact that most "overheads," or indirect costs, including interest, will be omitted from the recorded costs of assets; instead, these indirect costs will be considered as current expenses. In addition, because of the emphasis on explicit, contractual costs, certain important imputed costs, such as interest on proprietary capital, are ordinarily omitted altogether; instead, elements such as imputed rents and interest are buried in profit calculations.

Certain general effects of conservatism may now be indicated, still within the general framework of a reasonably stable price level.

1. Costs assigned by accountants to inventories and fixed assets are likely to be understated because of the restricted definition of cost employed. To this extent, then, recorded net profit will be understated during the periods when investments are being made; that is to say, when a concern is expanding; recorded net profit will be exaggerated in later periods when these understated assets are converted into receipts from customers; throughout all relevant periods, the recorded capital or net worth of the concern is understated in varying amount. In brief, profit will be shifted in the records from the earlier to the later periods. There can, of course, be no systematic, regular understatement or overstatement of profit from this cause. To the extent that currently reported high profits are the result of conservative accounting practices of past periods, they represent corrections of understated profits in those bygone years. The case of war plants later converted to civilian use comes to mind. The investment in them, in many cases, was written off as a cost of wartime operation and was not reinstated in the postwar years. As a result, net profit in recent years has been overstated, thereby compensating for the understatement of reported wartime earnings. No invocation of a rising price level is needed to explain this behavior. Uncertainty in the war years as to postwar prospects, plus favorable income tax treatment, is sufficient explanation. But the result still holds; namely, understated profit from this source in the war years, overstated profit in the postwar years, and exaggerated reported rate of return on an understated capital total.

2. Conservatism also dictates that certain costs, even though explicit and verifiable, be denied status as investment in assets. Instead they are immediately classed as expenses. The reference here is to costs incurred in developing future markets by means of advertising, brand names, trade-marks, and other promotional devices, or in developing improved operating methods by means of research and developmental work in general. Again, the rationale of the accounting procedure is clear: uncertainty is rampant in this area but so are the results; namely, that valuable assets in which costs of a type recognized by accountants have been invested are omitted from the asset list. Hence, the recorded capital of the concern is understated.

3. A third effect, tending to understate recorded capital, flows from a failure to record future cash receipts, except as they assume the form of enforceable contracts with outsiders. Thus, inventory items are usually carried at acquisition or fabrication cost, narrowly conceived, until sold. At point of sale, all the growth (increase, accrual) since acquisition is reflected; so that recorded revenues in the period of sale contain the value accretions properly assignable to earlier periods. If the rate of inventory turnover is high, this characteristic is not serious. If the rate of turnover is low, the distorting effect of conservatism may be pronounced. Parenthetically, it should be noted that, since we assume a reasonably stable price level, these conclusions hold whether inventories are carried on a first-in, first-out basis, a last-in, first-out basis, or an average cost basis. If prices do not change much, substantially the same results emerge from the use of each method.

Beyond the inventories now on hand or in process is an endless stream of future output, of future sales to customers, and of future receipts, as well as the related future outlays necessary to secure those benefits. But the books ordinarily reflect none of this, except in the form of investment in materials and supplies and in the fixed assets. The services of the fixed assets in particular may not be converted into receipts from customers for many years. Meanwhile the accounts will reflect those services at cost, again narrowly conceived. Their full growth and fruition will not be recognized until the period of the sale of the output into which those services have been incorporated. As a consequence, we find a tendency for revenues to be exaggerated, on the one hand, by reflection in period of sale of all the growth accruing to the item sold, and for revenues to be understated, on the other hand, by the failure to reflect at all the growth accruing to the items to be sold in the future.

Occasionally, especially when a concern is sold as a unit, these future events are recognized explicitly and paid for—a payment frequently capitalized as good will. The manner in which these good will balances are treated in the records is certainly not uniform. Suffice it to say that even in the relatively few cases where good will values are based upon "objective" and "verifiable" investments, a strong tendency exists to reduce the good will amount or eliminate it entirely from the records, again understating reported capital investments. As John B. Canning observed many years ago, it is best to interpret the asset total of a concern, even where the records are kept according to the best current practice, as an index of its resources rather than as an absolute measure of its wealth. And it is one of the attributes of an index that its relative movements may be of significance, whereas its absolute height is ordinarily of minor consequence.

III

Against a backdrop of a rising price level, the distorting effects of conservative accounting practices, sketched in the preceding section, become intensified. If not greatly modified, these practices lead to serious distortions in reported profit, capital, and rate of return.

To interpret the significance of a rising price level requires some forecast of its level at the dates on which receipts from customers will occur. Moderate rises, followed by moderate falls, create no serious problems, at least on the accounting level. We therefore assume that the price level has undergone a significant rise, as in fact it has in the last decade, and that it will either continue to rise or will stabilize at or near its present level. It will not, however, decline substantially in the foreseeable future.

With respect to inventories, current market prices measure expected realization fairly well if the rate of inventory turnover is high. If, however, the period of process is long and the rate of turnover is low, some forecast of future market prices is necessary. The difficulties of making this forecast may dictate the use of present market prices as the best guess available. The choice of present market prices, however, implies a forecast that future prices will not be substantially higher or lower than present prices. It is in this area, and in connection with this problem, that some concerns have adopted "normal stock" methods of pricing inventories (e.g., last-in, first-out; base-stock). These methods at best may exclude some capital adjustments from income calculations, but only at the price of excluding capital adjustments in their entirety from the records. This is, of course, why the valuations attached to inventories by many concerns employing normal-stock methods are so grossly understated as to be absurd in terms of current prices and prospects.

With respect to fixed assets, there are formidable barriers in the way of realistic revaluations in terms of enhanced realization by way of conversion into salable output in the future. Although sound in principle, imputed valuations of this type are probably statistical impossibilities. Accordingly, reliance may be placed upon replacement or reproduction costs: specifically, the current costs of replacing or reproducing the services, not the instruments themselves in the form in which they now exist. This emphasis on services rather than on instruments is required, of course, by the presence of technological change. As a crude substitute for specific (and expensive) studies of the replacement or reproduction costs of fixed assets, indexes of construction costs might well be employed in order to bring the recorded investment up to date. Not to be urged at all for the accounts is the practice of deflating current data, to carry it back to some base period. We are living and acting in the present and the future, not in the past. We need data relating to current and future conditions. To restate current data into terms prevalent in the past imposes upon us the additional task of retranslating them into terms prevalent in the present before they can be interpreted and used.

In summary, it seems clear that even in the presence of a reasonably stable price level, modern accounting procedures have been unable to overcome satisfactorily the uncertainties inherent in business activity. Under the unsettling effects of a prolonged major rise in the price level, the prospects of a satisfactory reflection of business capital and income diminish sharply. Much can be done, of course, by accountants themselves to improve defective procedures. Considerably more could be done if all of us were given the needed respite of a moderately stable price level.

AN EQUILIBRIUM RATE OF INTEREST

By Arthur H. Leigh
Reed College

An "equilibrium rate of interest" appears in many theoretical systems old and new, but its precise meaning is all too frequently left ambiguous. The concept may, in fact, have a number of different meanings, depending upon the nature and purposes of the system in which it plays a part. This paper discusses briefly a few of the possible interpretations which can be placed upon an "equilibrium" rate and suggests some of the theoretical difficulties inherent in them.

The idea of equilibrium in this context, as in its broader applications to price theory, may vary by degree from partial to general and from short run to long run. It is further complicated by distinctions between rates of return on real investment and rates of return on many varieties of contractual claims in the loan and security markets.

I shall begin with the consideration of the rate of return from investment in some specific industry, the product of which represents only a very small fraction of the total national product. This rate of return on each increment of investment in new productive capacity for the industry would be measured by the prospective annual yield net of all costs including depreciation divided by the cost of constructing the new capacity in question. Under such conditions it is commonly assumed that this prospective yield will tend to fall as successive increments of investment are made and that this falling prospective yield places a limit on the extent of new investment which will be made in the industry. The rate of return tends to fall because increased quantities of output can be sold (at least after a certain point) only at a lower price, because at least some of the inputs of the industry may be obtainable in increased quantities only at higher prices, and because after a point, economies of larger scale (if any) will not be sufficient to overcome the two above influences. If rational or economic behavior on the part of the investor can be assumed, an equilibrium can be defined for the industry at a point where the prospective net yield of a further increment of investment equals the "going" rate of interest (allowing for a risk factor appropriate to the industry in question) and where marginal expenditures are proportional to marginal productivities for all inputs used. It is clearly a partial equilibrium depending upon *ceteris paribus* assumptions including given demand for the product, given supplies of inputs, given technology, a given going rate of interest, and a given attitude on the part of investors toward investment in this or any other industry and toward bearing risk.

This equilibrium concept becomes more general when it is assumed that investment in all industries and fields will be carried on until prospective rates of return with due allowance for differences in risk equals the going rate or the market rate.

Ideally, then, the going or market rate serves as a guide for the economic allocation of new investment resources since in the equilibrium position the rate of return at the margin of all lines of investment would reach a common level. This equilibrium also depends upon a set of given conditions including tastes for all goods, incomes, technology in all lines of production, supplies of productive resources, stable monetary conditions, constant attitudes toward risk, and a given market (money) rate of interest. If any of these sets of given conditions changes, a process of adjustment with a generally predictable direction toward a new equilibrium would be set up. A change of tastes would, for example, lead to disinvestment from the industry whose returns have been reduced below the equilibrium level as a result of a shift away from its product, and to new investment in the industry favored by increased demand. New technological discoveries which increase prospective rates in a given industry will attract new investment until exploitation of the new opportunities again brings rates of return there into conformity with the equilibrium level. Under these assumptions, if such an equilibrium were reached or closely approached and the market rate were then significantly reduced by action of the government or the banking system, a general increase in the pace of new investment would follow until investment had once more pushed the prospective rate of return to the level of the market rate. This process is essentially that contemplated by Wicksell in his theory of the relationship between the "natural" and the "market" rate.[1] Important among the questions which arise at this point are those concerning the determination of the market rate or rates and those having to do with the causes of a supposed declining real rate of return to investment generally as new investment proceeds, as distinct from the causes of a declining rate of yield to successive increments of investment in some given industry or small segment of the economy.

If the market rate of interest were determined by forces which are more or less independent of those determining the rate of return on real investment, an equilibrium could be set up in which new investment in general is pushed to the point where its prospective marginal yield equals the market rate, essentially as stated above. The liquidity preference theory of interest and the marginal efficiency of capital play essentially this role in the Keynesian system. The conditions would also be met if the market rates were rigidly set by the government or the banking system, thus establishing an "equilibrium" based upon administrative decision.

---

[1] Cf. Knut Wicksell, *Interest and Prices*, translated by R. F. Kahn (London: Macmillan, 1936), Chs. 7-9.

On the other hand, on the common assumption that the market rate or the structure of market rates is in large part determined by the rate of return on new investment, we arrive at an equilibrium of a different sort.

Let us first examine the conditions under which it is reasonable to assume that market rates depend upon "real" rates of return. We may begin with the common-sense observation that market rates (or the prices of securities and claims) are immediately determined by the supply and demand for loanable funds (or the supply and demand for securities and claims). Changes in the prospective yields of real investment would affect the market rate primarily through their effect upon the demand for funds, although it should be noted that when the real rate rises, for example, some loanable funds which would otherwise have appeared as part of the supply on the loan market may be diverted to the more profitable real investment unless lured to the loan market by higher rates. Thus the degree to which real rates determine market rates will be greater the more directly the prospective rate of return on investment is related to the demand for funds, the more elastic is the demand for funds for the purpose of real investment, and the greater is the magnitude of this demand relatively to the demand for loans for all other purposes; e.g., for the financing of consumption and for the financing of governmental deficits. The first of these conditions depends partly upon business psychology and the extent to which businessmen typically do borrow to invest when prospective real rates rise. The second condition is more fully met the larger the amount of new investment which can be undertaken after a rise in prospective real rates without causing a substantial drop in that prospective real rate, at least within a reasonably short period of time. If this investment demand curve is very elastic, then the supply of loanable funds can shift very considerably in either direction without producing any marked effect on the market rate, and it would thus be true that the investment demand curve reflecting the prospective real rate of return dominates or determines the market rate. The third condition merely states that if investment demand is a very large proportion of the total demand, it will dominate the demand side of the loan market with rates on loans for other purposes conforming to rates paid on investment loans rather than vice versa.

If we grant these conditions and assume that market rates depend primarily upon real rates, allowing always for important differences in rates on different kinds of loan contracts due to such elements as risk and expense, we can define an equilibrium among rates on various assets and claims, but there is no basis for defining an equilibrium level for all rates unless we introduce some reasonably stable over-all limitation to further accumulation of real capital (and to the creation of funds) and to further decline in rates beyond some given level. Before passing on to this very long-run concept of equilibrium, I shall offer a few further comments upon the idea of an equilibrium among rates. Under this concept, the marginal advantage of holding each type of asset including cash balances and consumers' durables would be equal to that of every other type of asset for all marginal buyers, sellers, and holders of assets. In other words, this equilibrium would be reached when no one would have any incentive to try to shift his holdings from one form to another so long as existing rates of return on each form continued unchanged. The common level of rates (or abstracting from differences in risk and transaction cost, the common rate) so established would be one of the magnitudes in a system of general equilibrium in the Walrasian sense if at the same time all commodity markets were in equilibrium and if the level of aggregate income and the quantity of money were constant. This equilibrium level of rates would move through time in response to the net accumulation of capital, technological change, the discovery of new resources, increase of population, and similar changes. As rates on any particular form of asset adjust to the rest after some particular disturbance, they would be performing their function of allocating resources (except insofar as monopolistic restrictions which if they are stable may be incorporated in the definition of the equilibrium position prevent optimum resource allocation through this process), but as individual rates adjust toward the common level, that common level may itself be changing. No simple stable demand and supply relationship determines an equilibrium level of rates of return on capital generally. The equilibrium level here described is approached merely by the mutual adjustment to each other of rates on various assets as a result of the rational efforts on the part of asset owners and accumulators of capital to maximize their yields. The nearest one can approach to a simple theoretical explanation of this level is to say that the expected marginal rate of return on real capital assets defined as the ratio of net yield to construction cost sets the level since this form of asset is quantitatively far more important than any other, and that, on the whole, marginal productivity of new investment is determined largely by technological conditions and the total quantity of capital which has already been accumulated in the economy.[2]

Very important in the older literature on capital theory is the idea of a long-run equilibrium level of the rate of return on investment which would be high enough to induce maintenance of existing capital but not to induce further accumulation. The first question which arises in a discussion of this concept of equilibrium concerns the reason or reasons for the secular decline in rates of return toward the equilibrium level as capital accumulates.[3] Long-run diminishing returns to new investment cannot be explained in terms of the principle of diminishing marginal utility (gradual approach to a satiation of wants or diminishing utility of goods in general as more are produced) because any alleged decline in the marginal utility of the goods or services yielded by new capital would be accompanied by a fall in the alternative cost (in terms of utility) of producing the capital goods themselves, thus leaving the ratio between yield and cost of construction of capital unchanged. On the other hand, the principle of diminishing physical returns can be applied to new investment in general only with careful qualifications. The concept is usually applied to a case in which the marginal productivity of a specific productive agent falls as the quantity of it used in a process increases relatively to the quantity of other agents used in the process, the latter usually being assumed constant. But capital in general and new investment in general are very broad concepts. Current income can be devoted to the production of additional capacity in almost any form, including not only the buildings, machines, and stocks of materials, etc., which have always been included in the capital concept, but agricultural, mineral and timber resources, the productive talents and skills of human beings,[4] and technological knowledge. In other words, it would be difficult to find any significant class of productive agent which is fixed in supply and which would serve to explain diminishing returns to investments in those agents which are increasing in quantity. If new investment increases the quantity of some classes of agents, this may raise the prospective yield of other (complementary) agents which have not increased. This increase in yield will then induce investment in these (or economically equivalent) agents as well, to the point where their prospective yield equals the yield of other forms of investment. We thus have returned to the moving equilibrium among different forms of investment which was discussed above. But even though no agents are fixed in supply, it is quite obvious that some can be increased in quantity only at higher cost per unit of effective productive capacity as an economy expands through time. This is true particularly of natural resources which can often be augmented only by tapping more remote areas or veins or by using sources which for various reasons are less well adapted to exploitation. If equilibrium among different forms of investment tends to prevail, these productive agents will not be increased to the extent of the increase in those which can be augmented without higher cost. Investment in their augmentation will be limited to that which can be undertaken without pushing the yield on such investment below the common level. The ratio between the quantity of other agents and the quantity of these agents will increase, subjecting investment in other agents to diminishing returns. As the general level of the rate of return declines, investors may be induced to augment the rising cost agents further, but this fact only serves to slow down and not to prevent generally falling rates of return.

---

[2] There has been considerable disagreement over the importance of the pace of new investment in determining rates of return on new investment; i.e., "the marginal efficiency of investment." There appear to be three plausible reasons for assuming a negative functional relationship between the rate of return and the pace of new investment. These are: (1) the increase in the prices of investment goods resulting from an increase in investment activity; (2) the lower efficiency and productiveness of new assets when the quantity of new investment, stimulated, for example, by the availability of funds at low rates of interest, runs ahead of adequately worked out plans for the most effective utilization of new assets; and (3) the fact that at any given time there is a wide range of possible fields of investment in which widely differing rates of return can be expected, more of which would be undertaken if interest rates are low than if interest rates were high. The first two of these actually relate the rate of return not to the absolute volume of new investment per unit of time but rather to the degree of unexpected increase (or decrease) in investment activity over immediately preceding periods. The third amounts merely to saying that at any time there is a negatively sloping aggregate demand curve for loanable or investable funds when, as is always the case, an equilibrium among rates on all lines of investment is not in fact realized. The moving equilibrium level of rates mentioned above would probably be disturbed by significant changes in the pace of investment induced by such influences as governmental monetary or fiscal policy or general changes in investor psychology, but such disturbances are probably relatively temporary. Professor Hayek has recently indicated his belief that changes in the pace of investment may lower rates of return and maintains that even in the short run the rate of time preference sets a minimum "equilibrium" level below which these rates of return will not fall. Cf. F. A. von Hayek, "Time Preference and Productivity, A Reconsideration," *Economica*, February, 1945, pp. 22-25.

[3] For earlier discussion of this problem and some of the others to be touched upon below, see E. Hagen, "Capital Theory in a System with No Agents Fixed in Quantity," *Journal of Political Economy*, December, 1942, pp. 837-859; and Frank H. Knight, "Diminishing Returns from Investment," *Journal of Political Economy*, March, 1944, pp. 26-47.

So far, we have not taken into account the effects of investment in the acquisition of new technical knowledge which tends to increase the productivity of other investment and which, unlike most other forms of investment, is probably subject to increasing rather than decreasing returns through time.[5] Although this is a peculiar form of investment in that people investing in new technology find it difficult to appropriate for long and hence to capitalize their results except through the use of the patent laws, it is clearly a form of investment which has been extremely important in increasing world productive capacity and, moreover, in keeping rates of return on new investment from dropping lower than they have. Thus if the rate of return on investment in general is observed or assumed to fall secularly, it must be because the influence of those productive agents which are augmentable only at higher and higher cost is not being offset by the effects of investment in technology and discovery. Thus even if there were some force limiting the decline of the rate below a certain level, it would be doubtful if this could be called a true equilibrium since it is not true that forces are necessarily set in motion to push the rate toward that level whenever it departs from that level. A negative relationship between the quantity of capital and the level of rates of yield would be much clearer and more convincing if it were assumed that technology remains constant as capital accumulates. But by its very nature, changes in technology represent an essential part of new investment which is rarely a mere matter of adding units of productive capacity which are identical to those already existing.

---

[4] J. R. Walsh, "The Capital Concept Applied to Man," *Quarterly Journal of Economics*, February, 1935, pp. 255-285.

[5] The use of the terms increasing and decreasing returns here meaning greater (or smaller) yield to successive increments of investment through time, must be distinguished from the use of these terms in the theory of a firm or industry where they refer to a negative (or positive) functional relationship between the unit cost of a product and the volume output per unit of time.

The problem of defining and explaining a limit to the supposed downward secular trend of yields is commonly answered in terms of a rate of return at which there is no incentive to make further net investment but at which owners of existing capital are just willing to maintain it. The assumption that this rate is positive implies that there is some resistance or psychological cost in accumulating capital (e.g., "abstinence" or "time preference"), the strength of which can be measured by the rate of return necessary to overcome it.

The concept of time preference, interpreted as an assertion that people normally or typically prefer present goods to future goods of like kind and quantity by some conceptually measurable ratio, has been stated, denied, restated, and redenied many times through its history, and it apparently still needs redenying. People obviously do prefer present goods (including money) to future goods of like kind and quantity, but one very good reason for this fact—and perhaps the only good reason—is that they can earn interest in the meantime either in the form of money or of real service yield; but if "time preference" is explained by interest, it cannot serve to explain interest. Apart from the opportunity to earn interest, a person's choice whether to have a given quantity of goods now or sometime in the future would depend mainly upon his expected resources and needs in the present and in the future. Whether a positive time preference is common to most people would depend upon whether most people would prefer a given total amount of income in decreasing, constant, or increasing installments through some given period of time. A priori, there is probably more reason to expect the latter alternative to be the more common choice than the first, a fact which would deny the truth of the time preference assumption. Furthermore, it appears to be fairly well established that many people would and do save and accumulate income even without prospect of interest earnings and, in fact, even at a cost. The desire for economic security is a very important motive and in times of monetary instability people are often more concerned with finding a safe form in which to hold wealth than with earning interest. If there is an irrational element in the saving process it is probably an excess rather than a deficiency of concern for the future which leads to accumulation of assets even in the face of knowledge that they are likely to depreciate in real value. Thus, there seems to be nothing in the time preference concept which would prevent interest rates from falling to zero or below. Even if there were some elements of truth in it, it could hardly be sufficiently definite and stable to serve as the basis for a long-run equilibrium concept.

Risk is another factor which may place a limit to any secular downward trend of interest rates. As the rate of yield becomes smaller and smaller, the chance of its being wiped out or more than wiped out by some change which reduces the capital value of the asset increases. Of course, we may define interest as net of any allowance for calculable risk; so that if the total yield is only just sufficient to cover the risk premium, interest is zero. But there are some elements of uncertainty which cannot be reduced to a calculable risk for which a risk premium could be defined. It may be argued that the element of uncertainty, combined with various costs, may prevent interest rates from reaching zero, but this factor too is unstable and indefinite and is hardly a satisfactory basis on which to rest a long-run equilibrium concept. If, as is usually the case, risk of loss is accompanied by chance of extra or windfall gain, the whole problem of the psychology of gambling enters the picture. Experience shows clearly that many people deliberately take gambling chances when they know the odds are heavily stacked against them. This tendency seems to be greater the wider the range of possible results; i.e., the greater the possible gain and the possible loss.

Discussion along the foregoing lines has led to some speculation about whether the "long-run equilibrium" rate of interest (at least net of risk) is zero,[6] since there is no definite force tending to arrest a secular decline in rates of return short of that level. An important question which here arises is whether in fact rates would actually fall to zero, even in the absence of investment in technology. As rates fall to very low levels, the possibility for additional investment appears to widen phenomenally. In other words, if people are willing to receive sufficiently low rates of return, innumerable opportunities for investment at such low rates appear, such as the utilization of so far unexploited natural resources of material and power which require very large initial investment. This is an a priori statement, but a reasonable one. It affords at least one reason for minimizing the importance of the problem of the zero rate as a long-run equilibrium rate.

---

[6] Cf. Paul A. Samuelson, "Dynamics, Statics, and the Stationary State," *Review of Economic Statistics*, February, 1943, pp. 58-68, and references there cited.

To sum up, I am inclined to dismiss the notion of a long-run equilibrium rate in the sense discussed in the immediately preceding paragraphs as undefinable and for the most part unimportant for economic analysis. On the other hand, an equilibrium between or among rates of return on all forms of assets is very important. In their role as guides to investment and disinvestment, differential or disequilibrium rates of return play an essential part in the resource allocating function of the price mechanism. The process by which they move toward equilibrium vis-à-vis one another, the numerous obstacles to that process, and the ways by which it can be influenced by action of the government and the banking system are all matters of primary importance to economics. The real importance of any equilibrium concept lies in the process by which relevant magnitudes move toward it. The significant equilibrium rate of interest is a moving equilibrium rate which in a dynamic economy is never actually realized in the sense that it prevails in all lines of investment but which serves roughly as a measure of the alternative cost of any given investment at any given time.

DISCUSSION

Jacob A. Stockfisch: Both Weston and Leigh express doubt as to the possibility of the rate of interest falling to zero short of free services. Weston, adhering rigorously to the static state concept, concludes that "it is highly probable that time preference would assert an influence on the supply side." However, he offers no conclusive demonstration of this. Leigh, on the other hand, virtually rejects time perference as a force appreciably affecting the supply of capital under any circumstances—even at the level of the static state. Not only is it possible that individuals would continue to tip the scales in favor of future consumption as opposed to present consumption, even if there were no investment alternatives available; it is also likely that time preference, if rigorously interpreted, does not in itself give rise to any appreciable capital accumulation. If by time preference we mean the alteration of the time shape of one's consumption of services so that it does not coincide with one's production of services, each individual in a society would be alternately investing and disinvesting. Time preference schedules could be any shape, with any given stock of capital. The only condition under which the stock of capital could change would be if some individuals did not get around to consuming what they initially accumulated; i.e., if they erred in their expectations. If we define time preference as deferring consumption so that one's heirs could consume, we are placing quite a strain on the concept. Even if we accept this view, it would still be difficult to account for any significant amount of capital accumulation as a result of this behavior. It is no wonder that Schumpeter, who pushed the time preference concept to its logical conclusion, elevated bank credit creation to the role of prime mover in the historical process of capital formation.

On balance, it seems that there is no unique aspect of economic behavior upon which a long-run equilibrium rate of interest could be postulated. If a situation came about in which the value of the capital stock remained constant, i.e., if something analogous to the economists' static state became a fact, it would be a result of an entire host of factors which can affect the supply of all productive agents, including human beings. An evaluation and treatment of such forces would carry us into virtually every phase of human history, culture, and psychology. A theory which purported to explain such a phenomenon could not really do so unless it aspired to the role of a philosophy of history. For this reason, as well as those given by Leigh, the entire conception of a long-run equilibrium rate of interest should be given up, along with the conception of the static state for the purposes of analyzing capital and interest.

Leigh's discussion of the effects of incalculable risk (uncertainty) upon the rate of interest, as well as the implication by him that the psychology of gambling enters the picture when we drop the perfect foresight assumption, is high lighted by Norton's reference in his conclusions that Professor Knight's distinction between risk and uncertainty has implications that "require substantial revisions in most every field of economic theory." It is perhaps in the field of capital that the most significant revision may occur. It would seem that because individuals know that they do not possess perfect foresight, and because they cannot reduce the unknown to a certainty equivalent by some form of insurance, it is quite possible that the purchase of an asset embodies the possibility of a capital gain in the mind of the economic subject. There is much more to the valuation process than concern with a unique future flow which is discounted by a capitalization rate. This is emphasized by Moonitz' statement that in accounting practice the capitalization principle of asset valuation applies only to formal documents, the future money yields of which are rendered relatively certain by virture of legal sanctions, while there are no objective criteria for evaluating other types of assets or claims. Customarily, in theory, the capitalization concept is applied to both debt claims and real assets on the assumption that individuals indifferently view each of these sources of money yields—and that it is only a money yield in which individuals are interested. However, if we recognize the aleatory element, it is quite possible that the rate of interest, calculated *ex post* for all investment decisions, may very well be zero or negative. Professor Knight has stated that very likely this has been the case with respect to investment geared to the exploitation of natural resources; and Lord Keynes has implied that the prospect for gains of this nature might very well keep an enterprise system going even if the marginal efficiency of capital, in his sense, should be zero.

Thus, it should be kept in mind that uncertainty is a two-way street. In recent literature there has been a tendency to treat uncertainty as though it were something which had to be discounted. This is undoubtedly the type of uncertainty to which Norton has referred; e.g., uncertainty on the part of those who actively guide investment activity with respect to their ability to meet the requirements of a money loan. This, as Fellner has shown, can be the major contributing factor to an impasse of less than full employment, despite a zero rate of interest (or specifically, zero yields of securities net of risk and cost of servicing the loans). This type of uncertainty, as Fellner has pointed out, does indeed "have institutional roots," and consequently it may be well to examine critically those institutional forms which give rise to this particular brand. The work of Hart, Hicks, and Fellner indicate some fruitful lines along which this problem may be pursued.

Weston's classification of capital theories into the Austrian concept and the productivity theory raises an interesting question with regard to those Austrians who did accept marginal productivity, as opposed to time preference, for the determination of the rate of interest. The difference between the productivity theory which Weston presents and the Austrian productivity theory of interest lies in the fact that the Austrian variant seeks the determination of the interest rate in the increased productivity of the original factors which, due to the advances of capitalists, are sustained in a more roundabout process of production. This immediately becomes a discounted marginal productivity doctrine; i.e., the original factors are advanced to their discounted marginal product, the difference between the value of the end product and the advances to the original factors being the return to the capitalists. This raises the question if those who accept the Austrian variant of the marginal productivity theory of interest implicity assume as given that which the theory purports to explain, because the discount rate must be known in order to remunerate the original factors.

It appears that the Austrian theory lacks finality, and that the capitalization rate must be explained by forces which transcend productivity considerations. It denies, on the one hand, that capital agents themselves are productive; and on the other hand, it rejects the cost of producing capital agents as the ultimate determinate of their value. Thus the theory is complete only if a capitalization rate is given. Time preference or some type of monetary theory can fill this gap. However, there are objections to these theories on other grounds. In conclusion I would state that Weston's classification of capital theories provides a very convenient framework within which to evaluate the theories of particular individuals.

JAMES S. EARLEY: I have no comments to make on Professor Moonitz' paper, which I nevertheless admire as a clear statement of the difficulties accountants face in reflecting economic realities in their accounts. I shall confine my remarks to the other three papers.

Putting it briefly, I agree with almost all the conclusions of our authors, but wonder a little about the validity of their assignments, at least as they have been handled. Certain observations concerning the general character of the papers as a group may make my position clear.

Only one of the four papers (Professor Leigh's) deals primarily with interest theory, and his is confined primarily to capital yields. This is in contrast to recent programs on these problems.

A second characteristic of the papers is absence of any discussion of short-period interest or investment theory. No controversy concerning the validity of the "liquidity preference" or "loanable funds" theories appears in these papers, nor is there any appreciable discussion as to what conditions stimulate or inhibit investment in any short period of time, such as during the business cycle. Can one infer that at last there is peace between the Keynesians, anti-Keynesians, and neo-Keynesians on these questions?

Equally notable is the rejection of the central doctrine of classical capital and interest theory; namely, that the interest rate acts as the regulator of saving and investment. The concept of an equilibrating rate of interest is accepted by Professor Leigh, you will notice, only with reference to the problem of allocating resources, not to either the short- or the long-run processes of saving and capital formation. He appears to be joined by Professors Weston and Norton in rejecting the proposition that interest rates will automatically tend towards levels that equate saving and investment.

But the most salient characteristic of the papers under discussion is the common dissatisfaction shown with any theory of capital or interest based on the hypothetical elimination of (1) technological changes or innovations and (2) uncertainty. By all of our authors investment is seen as an essentially dynamic process, and interest rates as prices determined in, and reflecting, a distinctly dynamic situation.

Yet strangely enough almost the entire discussion turns back from the trends in capital and interest theory established by the work of Wicksell, Robertson, Schumpeter, Ohlin, Keynes, Hicks, and others; namely, the trend towards treating these phenomena as distinctly short-period dynamic problems. The authors, generally speaking, approached their topics from the long-run standpoint, analyzing more or less static models which seek to explain investment levels and interest rates.

I think that the late Lord Keynes's remarks about the orthodox theory of the rate of interest properly apply to such discussions at the present time:

> The orthodox theory of the rate of interest properly belongs to a different stage of economic assumptions and abstractions from that in which any of us are thinking today. For the rate of interest and the marginal efficiency of capital are particularly concerned with the *indefinite* character of actual expectations; they sum up the effects on men's market decisions of all sorts of vague doubts and fluctuating states of confidence and courage. They belong, that is to say, to a stage of our theory where we are no longer assuming a definite and calculable future. The Orthodox theory, on the other hand, is concerned with a simplified world where there is always full employment, and where doubt and fluctuations of confidence are ruled out. . . .[1]

Why do we feel, despite these recent influences, that we must still consider the problems of capital and interest in long-run equilibrium terms? It seems to me three factors explain this.

First, short-period theories are never wholly satisfying to us, trained as we are from our beginnings in equilibrium analysis. Subconsciously, we feel such theories must be superficial. We must search further for what is "normal" in interest and capital as in price and distribution theory. Such intellectual persistence is estimable in economists; but we should not feel too disappointed when, as here, we do not find any clear long-run norms.

The second factor explaining our stubborness is the growing interest in the theory of economic growth or development. This branch of theory, so long neglected by orthodox economists, is manifestly an extremely important branch. As part of such theory we must inquire whether there are tendencies in the modern economy towards a decrease (or even the petering out) of investment opportunities or tendencies toward a falling rate (or perhaps a zero rate) of return over cost. It is understandable that we should start out from such propositions as have come down to us from classical and Austrian theories concerning what seemed to be secular equilibrium positions.

A third explanation for our following up these old paths of inquiry, perhaps, is that we have taken too literally some observations of Keynes and Schumpeter. We seem to have overresponded to Keynes's proposition that, with sustained full employment, the interest rate would before long fall to zero. We must remember that Keynes was here explicitly referring to the "pure" rate of interest, which he confessed was a conceptual mirage. We should also remember Keynes's maxim that words should be a little wild, since they are the assault of thought upon the unthinking. Schumpeter's challenging theory of a zero interest rate in a competitive world without innovations has similarly led us, perhaps, to attach undue significance to the "ultimate tendencies" in static equilibrium.

It is true that the "New Economics" has affected our model building in capital theory. This is well reflected in the interest in various secular, so-called "dynamic," models of aggregate equilibrium, based, for example, upon the acceleration principle, such as the models examined and found so wanting by Professor Norton.

---

[1] J. M. Keynes, "The Theory of the Rate of Interest," in A. D. Gayer, Editor, *The Lessons of Monetary Experience* (New York: Farrar & Rinehart, 1937), pp. 150-151.

Professor Norton and our other authors have shown that the great weakness of all such model building, whether based on the old or the new economics, is the abstraction they make from the truly dynamic factors in the economy, particularly changing technology and other innovations and uncertainty. None of the models discussed by our authors can make explicit provision for these factors and, consequently, the authors agree, none of them gives us satisfactory answers as to the character or even the existence of any long-run equilibrium in investment or capital yield.

Professor Norton's paper expresses the shortcomings most clearly. As to cycles he says: "The secular trend and the cyclical fluctuations of an economy are inseparable. . . . They are all part and parcel of the same thing." In discussing the relation between capital investment and technical change, Professor Norton concludes: "Technical progress is embodied in capital formation. This constitutes a truth that we will do well never to overlook." Professor Leigh concurs with the understatement: "A negative relationship between the quantity of capital and the level of rates of yield would be much clearer and more convincing if it were assumed that technology remains constant as capital accumulates. But by its very nature, changes in technology represent an essential part of new investment. . . ."

As for the implications of uncertainty on the concept of an equilibrium level of investment, Professor Norton rightly suggests, in his conclusion, that long-run static models which eliminate uncertainty are of little value in advancing our understanding: "Decision making under true uncertainty is not different in degree from that under certainty; it is different in kind. The full implications of this for the theories of investment and liquidity have only begun to be realized."

The upshot of these papers, then, seems to be that we are chasing will-o'-the-wisps when we search for principles determining equilibria in investment and yields on capital within the confines of essentially static competitive models. Are we, therefore, at sea with respect to principles governing either short-run or secular movements in investment and capital yields in the real world?

I think not. We need not be much disturbed, as our authors appear to be, by the weaknesses they find in the traditional principles of time preference and diminishing returns. We can explain, I think, both short-run cycles and possible secular tendencies in investment and capital yield upon principles carried over from newer branches of theory. We must never forget that we live in a dynamic and imperfectly competitive world.

Cycles can be explained along lines such as those of Keynes and Schumpeter: by tendencies for innovations and hence investment to be bunched in near equilibrium situations; by increasing investment risk as a boom progresses; by contagions of optimism and pessimism; and by principles, more or less well accepted from Keynesian theory, such as the multiplier and acceleration principles, inventory cycles, movements toward increased saving as a boom reaches its peak; and so forth. These now familiar principles can be added to undoubted conditions of diminishing returns to investment caused by temporary fixities of factors of production in the short run, when possibilities of technical change are limited. And will anyone deny that, whatever may happen to prospective capital yields, rates on loans are sticky?

As for the secular long run, it may well be that virtual "diminishing returns" to investment holds, despite possibilities of technical change, because of: laggard movements of consumption in an increasingly wealthy society, causing effective demand to be insufficient to make investment at rising levels profitable; combined with increasingly monopolistic and oligopolistic tendencies in maturing capitalism which may inhibit price adjustments, resource shifts, innovations, and hence capital investment.

In other words, it appears to me that in analyzing secular as well as cyclical tendencies of investment and interest rates we can do little better (and could do much worse) than make use of the theoretical tools and empirical generalizations which have been, and are still being, built up from studies of short-period economic processes, of business behavior, and of institutional structure. I doubt whether it is profitable to continue theoretical investigation of long-run static equilibrium tendencies in the fields of capital and interest. This conclusion, I gather, is quite in harmony with those of the authors of these papers.

ECONOMIC STABILIZATION

THE AMERICAN ECONOMIC ASSOCIATION COMMITTEE REPORT ON ECONOMIC INSTABILITY

By ARTHUR SMITHIES
Harvard University

I

I am very grateful for the opportunity to welcome this report and to congratulate the authors on their dispassionate and lucid exegesis. I also welcome the opportunity to appear as a critic rather than as an author of a full employment report. But I do not make my comments in any spirit of rivalry: the present report may contain merits that the United Nations Report does not possess, and some of the major criticisms I shall make apply equally to that report.

As the authors point out, much of the report does not deal with the conditions of today or the foreseeable future. However, the major questions to which they point as unsettled are just as relevant to present conditions as to a state of affairs that I hope we can describe as more normal; and it is on those that I want to focus most of my attention. Parenthetically, I regret the compulsive need to affirm that what I am going to say has any contemporary relevance. The traditional pessimism of economists and our chronic tendency to project present conditions, especially when they are bad, into the future have had profound effects on human history. What a different and perhaps more agreeable place the world would have been had Ricardo, Malthus, and Marx been endowed with more than human foresight.

II

If the report does represent a consensus of American economists, it means that our thinking has now reached a state of Keynesian conservatism. So far as it depends on economic doctrine, it could have been written soon after the publication of the *General Theory;* and it could not have been written before. Let those who say there has been no Keynesian revolution ponder over the validity of that assertion. According to the report, the motivating force for economic activity is the effective demand that results from the decisions of consumers, investors, the government, and foreigners. Consumers' expenditures are held to depend on the size of their incomes, and their monetary assets. Or to be more accurate, the authors mention nothing but income—not even past income—and monetary assets as determinants of consumers' expenditures.

While I have always stressed these influences on consumption myself, I now feel bound to protest if economists are being invited to accept an income-monetary theory of consumption in the same spirit as John Stuart Mill accepted the Ricardian theory of value. Is it possible to refute a theory that maintains that fluctuations in consumption as well as long-run trends stem largely from the decisions of producers of consumers' goods to produce new products, to incur selling expenses of all kinds, and to change relative prices? During and after the war we had strong evidence that changes in the production of durable consumers' goods did affect the relation of consumption to income. Is it out of the question that in more normal times decisions from the supply side may induce fluctuations in the propensity to consume?

Even if an adequate explanation of consumption must take producers' decisions into account, it may still be possible to achieve substantial stability through fiscal and monetary measures. But other possibilities for stabilization are opened up—possibilities which we may reject today but be quite ready to accept ten years from now.

It is likely that the long period of military preparation on which we are now embarking will bring permanent changes in the relation of government to business, and control measures that are inconsistent with private enterprise today may be permanent and compatible features of the economy of tomorrow. I cannot exclude the possibility that the programing of private production may become the central core of stabilization policies of the future and that fiscal and monetary policies may be reduced to a position of ancillary importance.

Beyond this general comment, I have nothing but commendation for the Committee's fiscal and monetary policy suggestions, so far as they go. I note that the authors have not found a satisfactory rule of thumb to guide budgetary policy; and that difficult and complex questions of timing discretionary policies still remain unanswered. But I have nothing useful to suggest at the present time. Let me now turn to the major questions that the report leaves unanswered.

III

Whenever one encounters a proposal for stabilization through fiscal and monetary methods, whether it be by Keynes, Beveridge, Hansen, the U. N. Report, one can be quite sure that the inflationary dilemma will be recognized but left unresolved. The present report is no exception. The consensus evaporates when it comes to questions how full employment and price stability are to be achieved at the same time. Full employment is still haunted by the prospect of a wage-price spiral.

The report sets out four possible policies: First, the extreme radical view that the government should remove all possible barriers to competition in commodity and labor markets; and that those industries where it is impossible to restore competition should be nationalized. Second, that the government should use selective price, wage, rationing, and allocation to stabilize key sectors of the economy. Third, that organized private groups such as large corporations and labor unions—the report does not mention organized agriculture—should voluntarily accept rules for private behavior that will achieve stability of the price level. Fourth—the minority suggestion of Milton Friedman—that the government should use fiscal and monetary measures to stabilize money income and leave it at that. In modern conditions, the proposal involves fluctuations in prices, wages, employment, and production, but cumulative movements would be avoided.

In my view, all these suggestions have elements of usefulness, but none of them affords a complete answer in itself. Some attempt must be made to achieve a synthesis.

The perfect competition proposal would resolve the dilemma if it were practicable. It would in fact create the conditions presupposed by Keynes in the *General Theory*. There he assumes perfect competition in every industry, and does not get into inflationary trouble until full employment is reached. Before that point competition holds prices down. After it, increases in effective demand produce general inflation; autonomous wage increases do occur and they result in corresponding price increases. There is no inflationary dilemma if government action holds effective demand slightly below the full employment level.

I doubt whether anyone seriously believes that it would be possible to achieve conditions of perfect competition over an area wide enough to resolve the inflationary dilemma. Any government able and willing to follow the policy proposed would probably find that nationalization would be the rule and the achievement of competition the exception.

Economic controversies can be more readily understood and economic knowledge furthered if we decide at the outset whether the author of a proposal is attempting to construct an ideal type of economic system or whether he is formulating a program for adoption in the world as it is. Both types of activity are important and useful. Unless we are completely cynical about the usefulness of economics as an independent discipline, we must favor the construction of ideal systems as anchors for our practical proposals. Without such anchors economics would become the servant of politics and economic policy would depend exclusively on the currents of political expediency. On the other hand, if ideal systems are themselves put forward in the guise of practical proposals, economists can legitimately be charged with tilting at windmills.

I regard the perfect competition proposal as an ideal system and in that sense useful. It is important to know that stability can most easily be achieved in a competitive system and that measures to increase competition should form part of a stabilization program. But to regard perfect competition as a necessary condition for stabilization seems to me to give rise to the same difficulties as to regard Prohibition as a necessary prerequisite for a good society.

The view that the inflationary dilemma can be avoided through resort to compulsory controls over prices and wages when carried too far overlooks the nature of government, particularly in a democratic state. Inflationary trouble arises either because fiscal expansion is carried too far or because organized groups within the economy contend with each other to increase their relative shares of the national product. Can we assume that groups that refuse to exercise the self-restraint needed to make a fiscal program effective will submit to a system of controls imposed by the government they themselves help to select? We are too ready, as economists, to regard the economy as a marionette theater and to make the facile assumption that those who pull the strings have no relation to the puppets they control. This is not true even in a dictatorship; it is far from true in a democratic state.

In view of these elementary political facts, I believe there is a limit to the extent which controls can be effectively used on a permanent basis. Some economists have advanced the suggestion that the simplest, and perhaps the only, way to stability is for the government to generate a permanent state of excess demand through fiscal policy and to suppress the resulting inflation through the permanent use of direct controls. Apart from the objections to such a course in terms of economic mechanics, it should be rejected as a political monstrosity.

However, it is equally naïve to go to the opposite extreme and to argue that all exercise of direct controls by governments means that we are on the road to serfdom. I draw a sharp distinction between the occasional and selective use of controls on the one hand and the permanent incorporation of a complete control system into the economic structure on the other. Europe has provided instructive case studies on these matters in recent years. I have been impressed with the growing realization of the need for decontrol. But I have also been impressed with the fact that those countries that still make extensive use of controls seem to be no further along the road to serfdom than those that have abandoned them. However, in the United States at the present time economists will do well to emphasize the dangers of direct controls rather than to argue for their uses.

The notion that an effective stabilization policy requires co-operation of organized sectors of the economy with each other and with the government is one that I have come to accept with considerable reluctance. Fiscal and monetary measures in themselves can be regarded as steps that implement the traditional operation of a market economy, but co-operation among groups implies negation of the idea that once aggregate demand is stabilized, market forces can be relied on to determine the allocation of productive resources and the distribution of incomes. But has not the time come to recognize that the policies of organized groups form an integral part of the operation of the economy?

Whether it was true before, it is certainly true now that large corporations determine their price policy with one eye on their public relations. Since the last war we have had numerous illustrations of the fact that, in times of shortage, corporations are unwilling to charge what the traffic will bear, both because of the general public reaction and because of the effect of such a policy on their wage negotiations. And wage negotiations themselves have tended since the war to involve discussion of the relation of wages to profits as well as the more traditional relation of money wages to the cost of living.

In view of the fact that organized groups will continue to exist and probably to grow in strength, it seems eminently desirable that all possible efforts be made to harmonize their policies with the requirements of economic stabilization. Yet it would be unrealistic and undesirable to rely exclusively on their co-operation to avoid the inflationary dilemma. But we cannot contemplate with equanimity the cohesive group organization that would be required to make co-operation fully effective—because of its possible consequences on the effectiveness of competition and economic growth. Nor is such cohesiveness likely. There is still much more competition in the American economy than many are prepared to recognize. Group co-operation, in my view, must relate to the formulation of general policies and attitudes rather than to specific action.

With the Friedman dissent, we return to the realm of ideal systems. If prices and wages were sufficiently flexible, there would be much to be said for stabilizing total money income and allowing prices and wages in individual industries to find their own levels. But with modern rigidities and modern group behavior, is it realistic to suppose that this can be done? With stable money incomes, a new round of wage increases would mean unemployment that would only be cured with a general wage decrease. Attractive though such a program may be from the point of view of economic aesthetics, I cannot conceive that any government that depends heavily on labor support—as all governments do—would have the strength of purpose or even the desire to allow it to be carried out. Although the Friedman program should be brought continually to the attention of policy makers, I cannot conceive that it can be regarded as the main basis for a practical policy.

Through no desire to please everyone, I conclude that all the measures that the Committee poses as alternatives—removal of obstacles to competition, selective and occasional, and direct controls and co-operation—must be used in combination to support monetary and fiscal policy if stability of the price level is to be associated with stability of employment. And I agree with the implication of Friedman's comment that if the government attempts, by fiscal and monetary measures, to maintain full employment at all times, it is unlikely to achieve a stable price level even under the most favorable conditions. There is no simple formula or magical trick that will produce the desired result. Stability will not be achieved without a general understanding by all sectors of the economy that more is to be gained from stability than from the pursuit of immediate sectional advantage. And this general understanding must be translated into more farseeing political attitudes than those to which we are accustomed.

IV

But all that is not enough. I seriously doubt whether the struggle for redistribution can be held in check except in the context of a growing economy; and this is especially true at a time when military needs are placing increasing demands on the national product.

Labor in particular will insist on a steady increase in its material well-being, and, unless total national output is increasing, the full force of this insistence will be felt in pressure for redistribution of incomes. And although redistribution will remain an end in itself as well as a means to higher mass living standards, a sufficiently rapid increase in total product may permit it to be held within feasible bounds. With increasing total output not only can real wages increase but money wages can rise without disturbing stability of the price level. Increasing productivity has saved the country from inflation in the past and may do so in the future.

While economic growth will make the task of stabilization easier, the stabilization policies that are adopted may hinder or promote economic growth. Full employment itself should promote growth since it assures the mass markets on which capitalistic success depends. On the other hand, certain fiscal policies—notably those that involve redistributive taxation—that will produce full employment in the short run may impair entrepreneurial incentives in a way that will slow down the rates of growth. It may then be still further slowed down through the consequent increased pressure for redistribution.

The report recognizes that economic growth is an important objective of policy and that stability may not always be consistent with it. But it does not assess various stabilization alternatives in terms of their effects on growth and does not recognize that growth may be a necessary prerequisite for stability. The Committee seems to have turned a deaf ear to the theme song of the Council of Economic Advisers—that in the ability of the economy to grow lies our promise of social security and stability as well as national security.

I must regretfully conclude that, judging by the report, we as academic economists are not confronting the issues of the present and the future with the imaginative vigor displayed in the past by our predecessors.

MONETARY POLICY AND STABILIZATION

By LLOYD W. MINTS
University of Chicago

The report of the subcommittee of the Association on stabilization deals primarily with the problem of policy. However, any discussion of policy must rest upon certain assumptions concerning the nature of the economic system. There are three distinct assumptions of this kind. These are as follows:

There are those who believe that an enterprise system is so nearly unworkable that it must be discarded. These are the collectivists. If this is our assumption, there is little point in discussing the problem of policy in an enterprise economy; rather, we should then become propagandists for the revolution.

Another group assumes that an enterprise economy is inherently subject to intolerable fluctuations, and possibly a low level of employment chronically, but yet that it can be made to function satisfactorily if only the government will institute the proper contracyclical policies. Their policy prescriptions usually involve the granting of discretionary power to the central bankers and to the administrative branch of the government.

The third assumption runs to the effect that if only certain definite rules and conditions are provided by the state for the carrying on of economic life, employment will be maintained at a generally high level, with only minor variations, in an automatic manner broadly comparable with the constant operation of the system to maintain general equilibrium in the presence of continuous shifting of tastes, of techniques of production, and of available resources.

Upon which of the above three assumptions does the report of the subcommittee rest? Manifestly not the first, since this point of view is explicitly disclaimed by the Committee. It is equally clear that the third point of view is rejected by the Committee, although not explicitly. The whole tenor of the report indicates a tacit assumption that the economy is inherently subject to wide fluctuations in employment and that we need not general rules for the functioning of the system but weapons to combat unemployment.

Since the Committee clearly made the second type of assumption, it was quite natural and proper that they should restrict themselves largely to a discussion of the means of offsetting major disturbances of an inevitable nature rather than with possible criteria, or general rules, for the use of these means. This position implies that monetary, fiscal, and possibly other "authorities" must, in the nature of the case, be left with discretionary power to decide when and to what extent the proposed measures are to be put into effect.

While the Committee pointed out the variety of beliefs among economists with respect to discretionary, nondiscretionary, and automatic monetary management and do not, in this connection, make any explicit statement regarding their own position, their belief in discretionary action is abundantly implied. Thus they refer to "the basic strategy of economic stabilization." "Strategy" can hardly have meaning except as applied to authority that has freedom to act in accordance with its own judgment. They assert that "wise use of the instruments of fiscal and monetary control is essential to economic stability"; and a reasonable interpretation of this statement is that they refer to "wise" use by the monetary or fiscal authority rather than by the legislature in prescribing a rule by which a monetary agency is to be bound.

Many of the means of stabilization suggested by the Committee could be used, whether or not they would be the best, to implement a policy outlined in terms of a specific rule of action for a nondiscretionary monetary and fiscal branch of the government. It is clear, therefore, that the basic difference of opinion among economists really concerns this matter of inherent instability versus automatic maintenance of stability.

Despite the great fluctuations of employment in the past, it is by no means true that the case against automatic maintenance of employment in a competitive economy has been established. We have never had, in the United States or in any other country, an established policy of monetary stabilization. Since this is the case there clearly are two possible explanations of the fluctuations in employment that we have known. One is that a competitive economy is inherently subject to such fluctuations; the other, that the proper conditions for the functioning of such a system have never been maintained. In this connection the notorious fact should be noted that the stock of money and output move cyclically in the same direction.

Under a system of fractional reserve banking it is clear that in part, at least, the change in the stock of money may be a response to changes in the level of business activity. As conditions became bad, businessmen find it unprofitable to borrow; and bankers fear for the safety of loans. Consequently, the stock of money declines. However, we should be wary about ascribing much importance to the decline in the stock of money which comes from the voluntary reduction in the volume of bank loans by borrowers. In the absence of fractional reserve banking, money used to pay off loans would have been hoarded by some one, and this hoarding would have had the same effect, both in kind and degree, as the repayment of bank loans. But the decline in the stock of money which comes from the initiative of the bankers is a different matter.

It is unlikely that a reduction of bank loans which results from the action of the bankers themselves will often occur as the initiating factor in depressions, although if bank reserves were reduced for some fortuitous reason bank action could be the responsible factor. Nevertheless, even though the banks do no more than accentuate fluctuations, their action could well be of major importance, since the reinforcing influence might be greater than that of the initiating disturbance.

However, an extension of our analysis suggests that the essential difficulty lies not so much with the banks as with the absence of any definite monetary policy which would offset the disturbing actions of the bankers and of the public, and, thereby, result also in the minimization of such actions in the first place. While ideal conditions may require the elimination of fractional reserves, there is no doubt that we could get along very well in the presence of the banks if only we would adopt an announced policy aimed at the maintenance of monetary stability. It should be noted, furthermore, that deposit insurance, which ought to reduce the danger of runs on the banks, and the fact that the banks now hold relatively larger amounts of government securities than formerly, will in any case undoubtedly reduce the perverse influence of the banks in the future.

I contend that a competitive system would automatically maintain a generally high level of employment, given monetary stability. If so, it follows that we need not weapons to be used at the discretion of monetary and fiscal authorities as various circumstances arise but definite and known rules in regard to the conditions in which business men must carry on their operations. Business calculations are in terms of a pecuniary unit, and it is fantastic that while there are definite and unchanging units for other measurements, such as the foot and the pound, there is none for the major unit of economic activities. We have provided laws for the enforcement of contracts, we provide police protection for property and person, and we provide that the public will not be capriciously deprived of their wealth by the state—except (but a large exception) when it finances itself by inflationary means.

Currently there are three general types of recommendations on monetary policy. Those who make the second type of assumption concerning the nature of the economy—that it is subject to inherent instability—would provide for discretionary monetary and fiscal management by central bankers and treasury officials. They assert that unexpected developments may give rise to differing monetary needs, and that, consequently, we must rely upon the judgment of men in responsible positions and depend upon them to act promptly and wisely. They do suggest certain possible criteria of action, but of course would not bind the authorities to act in accordance with the behavior of any one of these.

Those who make the third assumption—that under the proper conditions the system will automatically maintain a generally high level of output—can themselves be divided into two groups on policy recommendations. Nevertheless, there is a very large element of agreement between them, particularly in their common suspicion of the merits of discretionary management. As a substitute for such management one group would institute a completely automatic monetary system. The second group would agree concerning the desirability of automaticity, but do not see how it can be achieved. They therefore would turn to management by rule; thus limiting the element of discretion to what they believe to be an innocuous level.

There are two principal objections to discretionary monetary power. It robs policy of the very thing which is most needed in monetary matters; namely, certainty with respect to monetary conditions. If the economy is to operate automatically the public must be told that the stock of money will at all times be controlled rigorously in accordance with some pre-established criterion. Only in this way can those cumulative effects of a changing demand for money be reduced to a minimum. These effects, which have been emphasized so much in recent years in the discussions of expectations, are themselves in great measure the consequence of monetary uncertainty. Expectations would become a major stabilizing rather than a destabilizing influence under conditions of monetary stability which were the consequence of a definite and announced policy.

Both history and an examination of human nature suggest that we cannot rely upon men vested with discretionary monetary powers to act promptly and wisely. The undue anxiety of central bankers about the future and their tenacious and misguided hope that they can predict developments lead them to ignore present difficulties much too often. They strangely forget that anti-inflationary action can be reversed.

Only a brief consideration of the history of the Federal Reserve System will be sufficient to cause grave doubt about the reliability of central bankers. It is through changes in the volume of its earning assets that a central bank influences the stock of money. It is therefore normally an indication of wise action if central bank earning assets move inversely to the price level, or whatever indicator of boom and depression may be followed as a guide to action which moves up with boom and down with depression. Let us apply this rule on an annual basis to the Federal Reserve System for the thirty years from June, 1920, to June, 1950. We will rule out two of these years: one because the volume of earning assets was stable; the other because the price index was stable. During the remaining twenty-eight years, earning assets and the price level moved in the same direction in nineteen years and in opposite directions in nine years. These figures suggest, therefore, that the Reserve System was acting unwisely twice as often as wisely. If they had flipped a coin to determine their action the Board would probably have done better.

However, a test based on annual figures is in some ways not reliable. A more dependable measure of the wisdom of the Board in its use of discretionary powers can be found in its action at periods of outstanding need for action. For this purpose we may provisionally include six periods for consideration. They are as follows: 1920-21, 1929-31, 1937-38, 1940-46, 1946-48, and 1948-49. During four of these periods the credit outstanding of the Reserve System moved in the same direction as the price level, while during the remaining two these two factors moved in opposite directions. The two in question were 1937-38 and 1946-48. From 1937 to 1938 the price level fell by 9 points while the credit of the reserve banks rose by 1 per cent. For its performance in the second of these two periods the Reserve System merits no credit, since the price index rose by 53 points, while reserve credit declined by only 10 per cent. However, it may perhaps be said that the Board was under intolerable pressure from the Treasury during this time, and should not, therefore, be held responsible for its action. This may be so, but misses the point to my criticism. It is not so much my purpose to impale the Board as to show that we cannot rely on discretionary monetary authorities. If the Board was not responsible the Secretary of the Treasury was, and he in this instance was acting as a discretionary monetary authority.

Perhaps we should omit the war period. If we do so the best that can be said for the Board during the remaining five periods is that its action was right in one, so woefully inadequate as to be equivalent to wrong action in another, and decidedly wrong in the other three instances. But the extent of the changes in question is important. For the three periods of clearly wrong action the figures are as follows: From June, 1920, to June, 1921, the price level fell 74 points while the credit of the reserve banks fell 37 per cent. During the two years from 1929 to 1931 the price index fell 25 points and reserve credit 33 per cent. From 1948 to 1949 the respective declines were 12 points and 10 per cent. In the light of this examination we must conclude that when conditions have most urgently demanded monetary action the

Reserve System has predominantly followed a policy precisely contrary to that which was desirable.

CHANGES IN CREDIT OUTSTANDING OF THE RESERVE BANKS AND IN THE PRICE LEVEL

Period	Per Cent Change in Federal Reserve Credit Outstanding	Points Change in the Price Index (BLS Wholesale; 1926 = 100)
1920–21	—37	—74
1929–31	—33	—25
1937–38	+1	—9
1940–46	+850	+35
1946–48	—10	+53
1948–49	—10	—12

I would summarize in one sentence the position I have attempted to present as follows: We need not weapons to combat developed booms or depressions but stable monetary conditions maintained in accordance with some one, announced rule of action.

DISCUSSION

Edward C. Simmons: Before considering the specific content of the Committee's report, a brief remark on strategy and tactics is perhaps not out of order. This excellent report discusses many phases of the problem of reducing economic instability, but it says little on how economic knowledge is to be translated into operating policy. The American Economic Association's function terminates with fostering the preparation of such reports. Its charter does not permit it to take a stand on public issues. The report emphasizes that government must act in appropriate fashion if the economy's inherent instability is to be reduced. One has to possess great faith to believe that publication and discussion of the report will bring tangible results.

On the assumption that further steps are going to be taken, I wish to discuss certain aspects of the problem. Part of what I have to say grows out of the fact that the Committee was not under mandate to bring in a program for action. This circumstance permitted it to present a somewhat textbookish discussion of economic instability. The Committee's remarks on the part which might be played by rules are significant although the Committee leaves the matter open.

There is pressing need for a set of rules for the guidance of political administrators. These rules would constitute a replacement for the old rules of balancing the budget and adhering to the gold standard, which clearly were never adequate. They frequently led to incorrect actions, but under them vigorous positive action was indicated. In recent years administrators have frequently floundered in indecision because they have had no rules to go by. To put the matter another way, the task is to provide legislators and administrators with a new economic conscience as a substitute for the one which they lost when the gold standard and the balanced budget were jettisoned.

One of the speakers has exerted himself to keep before us the late Professor Henry C. Simons' compelling arguments for reducing policy objectives to definite rules of action. He has cast further doubt on the wisdom of relying on discretionary actions of administrative authorities. The Committee should have come to a firm conclusion on this matter.

The report is noteworthy for its emphasis on the role which monetary policy can play in economic stabilization. Many economists will be heartened to observe that faith is reviving in the power of monetary policy to control the level of activity. Few will find reason to object to the Committee's view that monetary and fiscal policy measures must be skillfully integrated.

The Committee is possibly too hopeful in its view that fundamental structural reforms are not essential. As matters now stand, control of the stock of money is not impossible theoretically but it is almost so in a practical sense. More important, those vested with responsibility frequently become confused as to whether it is money lending or money creation with which they should be concerned. A basic need is to separate these two really quite distinct functions so that those who are charged with responsibility for monetary policy will not have to work with an apparatus whose functioning is beyond the comprehension of persons of even more than average mentality.

A related fundamental reform is to widen the gap between money and other things. The stage of financial evolution has now been reached where only a specially trained economic taxonomist can identify money among the many species of debt which populate that jungle which we call the financial system. It seems almost absurd to talk about using monetary policy as a stabilizer until the stock of money has dimensions and until the structural arrangements are such that monetary management cannot be confused with management of the terms on which borrowing may be done in all sectors of the economy. The Committee's report is not entirely free from this sort of confusion.

Possibly equally sweeping reforms in the fiscal sector must be contemplated if the national state's financial affairs are to be capable of being operated intelligently by people assigned to the task by the workings of the machinery of government.

There is a prefatory note to the report which may suggest that the time is unpropitious to explore stabilization proposals. There is every reason to argue that the task must not be put aside. The ill-conceived measures used in financing World War II complicated the Committee's task greatly. The same temporizing makeshifts must not be used again. A forthright approach to mobilization need not leave a heritage of built-in destabilizers. There is, however, real danger in hastily conceived mobilization measures with built-in postwar full employment gadgets. It is to be regretted that the thinking of economists on stabilization policy is only now beginning to crystallize. Were the work further advanced, the immediate task woud be greatly facilitated.

EVERETT E. HAGEN: Professor Mints's paper, considered in the light of the Committee report, furnishes an informative indication of certain divergent viewpoints concerning economic stabilization policy. But the issues with which his paper deals seem to me not to be the basic ones, and I wish to offer only two brief and perhaps cavalier comments concerning the issues which he sketches.

Professor Mints asserts—reiterating a conclusion which he has advanced with supporting argument elsewhere—that if we stabilize the money supply we will prevent major fluctuations in economic activity. Such statistical evidence as is available points, I think, in the opposite direction. And, if uncertainty concerning the future is given a place is one's theoretical analysis, a theoretical base no longer exists, it seems to me, for believing constancy of money stock important in preventing a decline in activity. His analysis applies, he states, to a "competitive system." I believe that it is sound as applied to a competitive system defined in a highly restrictive technical meaning. But he applies his policy conclusions to the real world—and doing so is, I think, properly subject to Professor Smithies' strictures concerning putting forth ideal systems in the guise of practical proposals.

The other major argument of his paper is based on his assertion that advocacy of the use of policy measures to combat fluctuations in our economy is associated with advocacy of administrative discretion in applying those measures. It seems to me that he tortures the wording of the Committee report when he deduces that the Committee majority, which advocates policy measures to counter fluctuations, also advocates administrative discretion; but however that may be, it is worth noting that there is no necessary association between the two ideas.

Suppose, for example that it is agreed that tax schedules should be reduced quickly when necessary to fight unemployment or increased quickly when necessary to fight inflation. Congress may preplan the specific reductions or increases and thus set rules by which the changes shall come into effect automatically when certain conditions develop; or may preplan the tax changes without effective data, and then put them into effect in a day by a joint or concurrent resolution; or may grant administrators varying degrees of discretion in changing them. (The terms "strategy" and "wise use" of policy instruments may as reasonably be assumed to apply to the first or second case as to the third, it would seem.) Two things are clear: that administrative discretion is a matter of degree, not an either-or proposition; and that almost any degree of it or lack of it may as desired be associated with most countercyclical measures.

In the space remaining I should like to suggest the relationship of the topic at hand to our current national situation. The tides of history—if tides is the proper metaphor—have been running so fast in recent months that the topic of this session, as originally conceived, has in a sense become obsolete. The problem of maximizing production now seems far more important, relative to various other economic desiderata, than it seemed two months ago. How does its new importance relate to economic stabilization?

Most discussions by economists of the problem of inflation have explicitly or implicitly dealt with it from the viewpoint of the distribution of a given aggregate real income. Inflation is one way of deciding how the economy's aggregate output shall be divided. The establishment of fiscal-monetary controls sufficiently stiff to prevent inflation will cause an alternative distribution of aggregate output. And the suppression of inflation by general direct controls will cause a third distribution.

Now among these three methods, clearly fiscal-monetary controls can be the best. The hardships, inequities, and inefficiencies of inflation are notorious. And it is easy to show that for any distribution of income which may be brought about by price controls and rationing, a more equitable one—rendering greater satisfaction—can be brought about by fiscal-monetary controls. (Whether the best distribution law-making authorities are willing to bring about by fiscal-monetary controls alone is "better" in the eyes of any given beholder than one they are willing to bring about by fiscal-monetary measures supplemented by direct controls, is a different question.)

But such discussions assume that there is a full employment output which is *datum* and that the choice between fiscal-monetary controls alone and those measures plus direct controls will not affect the level of aggregate output. But when a major basic problem is to maximize output, a quite different and separable question arises: will the method used to prevent inflation affect materially the size of the pie to be divided?

In World War II, more than seven million persons above the estimated normal entered the labor force. Hours of work in manufacturing rose from 38.1 in 1940 to 45.2 in 1945; and to a peak of 47 in all durable goods manufacturing. This provided the equivalent of more than ten million workers whom we had not counted on before the war.

How was this performance achieved? The added workers entered the labor force for a variety of motives—some because their husbands were in the armed forces, some purely because of patriotism, and so on. But beyond doubt a dominating condition, without which the increase in labor force could not have occurred, was an intense demand for their services. So avidly did the market gobble up all that could be produced that employers in their eagerness to expand output were eager to hire workers beyond the peacetime retirement age, youths, and inexperienced and marginal men and women. The same influences resulted in long overtime. Without the hyperdemand the expansion of the labor force and of output could not have occurred.

I submit that if we are to duplicate that productive achievement we must re-create the hyperdemand which brought it about. How can that be done?

Obviously inflation cannot do it. For inflation is a process by which price rises convert a sellers' market into an equilibrium market—a market with an unsatisfied appetite for added goods into one where unsatisfied demand has been dissipated in higher prices.

Neither can fiscal-monetary measures do it. Fiscal-monetary measures prevent inflation precisely by reducing demand until it no longer has sufficient strength to draw prices upward. But by the same token, it no longer has sufficient strength to motivate the recruitment of youths, oldsters, and "added" family members into the labor force.

To draw millions of extra persons into the labor force, we must create perpetual "excess demand," a continuing "sellers' market." And the only way in which this can be done is to spend enough to create the demand, and then suppress inflation by direct controls while leaving the demand in existence. This consideration seems to me to outweigh the inefficiencies associated with direct controls.

The question of the best way to prevent inflation in a period of economic mobilization is a complex one. Elsewhere, Professors Hart and Galbraith discuss it at some length. In this brief comment, I wish to make only the single point that the greater the importance one gives to maximizing production, the more favorably one must look upon direct controls. If the desirability of maximizing production is sufficiently high on one's scale of priorities, it will "swamp" other considerations.

At this point the discussion ceases to be a merely economic one. As a citizen and social scientist and not merely as an economist—and for reasons too complex to present within the space available here—I judge that the desirability of maximizing output at the present time is such that the great increase in output attainable through the use of direct controls merits their use.

This argument should not be mistaken as a plea against strengthening of fiscal-monetary policy. Obviously, I think, we need as strong a fiscal-monetary policy as Congress is apt to give us, even under all the feeble pressure which can be placed upon it. We do not need unlimited inflationary pressure. We need only enough to provide a guaranteed market. Too much pressure may burst the controls.

Economists, it therefore seems to me, should at the present time advocate stronger fiscal-monetary measures and also direct controls.

WALTER A. MORTON: Professor Smithies, it seems to me, shows quite correctly that we have systematized and institutionalized the thinking of J. M. Keynes until it has lost its life and vigor. The time has come to place Keynesianism in its appropriate place alongside other ideas in the history of economic thought and readjust our theory and policy to this reorientation. We will then recognize that unconditional governmentally maintained effective demand is a contradiction in a free society and that the quantity of money and liquid assets, as well as incomes, have an effect on consumption, investment, and prices, and other of the neglected ancient truths of economics. Keynesianism in all its modern elaboration has become an empty formalism unsuitable for policy except as one among numerous remedies which may be appropriate to a given historical situation. The *General Theory*, like the classical theory, is only a special case. Each alone is inadequate but both combined furnish more insight.

I agree with Professor Mints that a fixed rule of monetary policy, or for that matter of any policy, is preferable to administrative discretion, provided, however, that a rule can be found appropriate to all circumstances to which it must be applied. If, moreover, such a rule can be discovered, then the distinction between rules and authorities will soon disappear because any sensible authority would apply the rule whether or not it was enacted into law. The issue is then whether such a rule has been discovered.

Everyone agrees that price stability is one of the aims of monetary policy; the only question is whether it shall be made the sole criterion for credit expansion and contraction without regard to other considerations, such as the volume of employment, prices of stocks, bonds, and real estate, and the solvency of the banking system. If the application of the price stability rule simply implies cheap money during a period of falling prices (and vice versa), then it may be ineffective in maintaining aggregate demand which in turn maintains prices. If, however, it implies further action such as government deficits, subsidized consumption, public works, etc., then the policy in practice is not likely to be different from Keynesianism and subject to the same limitations. Which of these two interpretations is intended?

Professor Mints believes the economic system to be inherently stable except insofar as unstable money creates fluctuations. In contrast, the Keynesians conceive the economic system to be inherently unstable unless aggregate demand is maintained by monetary and fiscal policy. I do not think we need to be restricted to these two views and then be forced to choose between the classical-Chicago and the Keynesian position. We can rather adopt an intermediate position incorporating the truth of both classicism and Keynesianism.

In the broader philosophical tradition these views may be compared to deism, theism, and humanism. The deists believed that the universe was so ordered from the beginning to make intervention unnecessary. The theists believed divine interference occasionally beneficial. The humanists simply accept the order of nature where it suits them and alter the course of events to serve human ends. The physiocrats and the classicists resemble the deists believing that the price system under competition will produce full employment and the best allocation of resources. The Keynesians hold the system to be unstable because the rate of interest, an essential cog in the price system, fails to regulate savings and investment so as to maintain aggregate demand at a level sufficient to insure full employment. Keynes is the prophet, and the state and the central bank play God. The third position, which I hold, can be designated as the historical-analytical theory. It holds with the classicists that the self-equilibrating factors have worked in the past and still are working to maintain high-level employment. But it also holds with Keynes that these forces are not always adequate to this purpose, because the price mechanism is not adapted to overcome disequilibria in the system created by historical conjunctures and by institutions which affect the distribution of wealth and income, and the habits of consumption, saving, and investment. Economic stability therefore requires optimal wage-price relationships and optimal aggregative relationships. Policy at any time must therefore be based upon a judgment regarding the nature of the disequilibrium. Is it Keynesian or classical? And it is the function of policy makers to form a judgment and act accordingly. No simple Keynesian or classical faith comforts us and provides us with a cloud by day or a fire by night which leads us into the promised land. Instead, we are left with a constant human struggle to act as best we can with the knowledge at our disposal. This is what, in fact, the theorist does when he stoops to the level of practical administrative decision regarding the important affairs of economic life.

Applied to the immediate past, I doubt whether we would have been better off in 1920 if Mints's rule or Keynesian remedies had been applied. Wholesale prices fell almost 40 per cent from 1920 to 1921, and money wages fell about 10 per cent. Mints's rule would have called for vigorous inflationary policies. So would Keynesianism. Instead we liquidated the inflation and proceeded to a rapid recovery and years of prosperity.

During the twenties, wholesale prices were stable or slightly downward, but real estate and stocks became highly inflated and we encountered the greatest depression in history. The price stabilizationists of this period, including Keynes, Hawtrey, Fisher and many others, contended for even greater bank expansion. Can we agree that this would have been helpful? Professor Friedrich A. Hayek attributed the onset of the depression to the price stabilizers and its severity to the attempts to prevent liquidation (*Monetary Theory and the Trade Cycle,* page 22). Regardless of the merits of Hayek's theory, it does not seem that cheap money would have prevented the major decline, nor that it alone would have insured recovery as indeed even Keynes came to believe by 1933. Nor can we be sure that public expenditure would have achieved lasting prosperity if it had been undertaken on a large scale before liquidation

MODERN INDUSTRIALISM AND HUMAN VALUES

INDUSTRIALISM AND CULTURAL VALUES

By Harold A. Innis
University of Toronto

The title of this paper, suggested by Professor F. H. Knight, implies a contrast such as that suggested by his colleague Professor J. U. Nef in the use of the title *Civilization and the United States*. Professor Knight states in a letter that he has in mind the German *Bildung* rather than *Kultur*. *Bildung* is defined as "formation, form, fashion, shape, organization, constitution, education, cultivation, culture, civilization," and *Kultur* unfortunately as "cultivation, culture, civilization." A document headed, "An Appeal—a Challenge," sent out at an early stage in the preparation of the program has the item, "Industrialism (Capitalism) and Culture (high or low quality of civilization). How far and wherein 'materialistic' and 'vulgar.' " Among Professor Knight's many contributions he has developed the quotation mark to new levels of usefulness.

I must apologize for this excursion in semantics since it probably reflects very recent and prolonged experience with a study of the importance of the meaning of words. I suspect, however, that the problem of semantics suggested in the title of this paper is part of the problem to be discussed in the paper. I can go further and suggest that the instructions sent out to readers of papers at these meetings regarding their length and the time allocated for reading reflect similar phases of the problem. The demands of industrialism in the form of time tables and a printing budget will have their implications. If I may appeal to a directive, a volume of papers and proceedings of 704 pages, covering twenty-two sessions, assumes a maximum of 4,500 words for each paper to be given in a maximum of thirty minutes, "talking at the rate of not over 150 words per minute." We are faced immediately in this very hall with the problem of the subject of this paper.

The writer and reader of a paper who has artistic interests must think in terms of a relatively fixed medium; namely, a maximum of 4,500 words in thirty minutes. The demands on artistic skill among those concerned with the field of economics implied in the writing of sixty papers or more can be left to the imagination, particularly as most of us have been trained in another medium; namely, the fifty or sixty minute lecture as part of a long series of lectures following a general pattern. Lest I should appear unfair in these remarks, I must quote part of a handwritten note from the President in which his recognition of the limitation of machine industry or industrialism in a program of the American Economic Association is obvious: "I'm not thinking in terms of scientific contributions on such subjects; only intelligent stimulating discussions. The papers can be summarized for the proceedings if the speakers don't think them finished enough for printing as written." Finally, his concern with the problem explains my appearance on the program and I suspect his ultimate consent to become President of the Association.

To quote again from his letters, he wanted a paper on the "relations between 'modernism' and 'culture' (cultivation not culture in the anthropologist's sense). . . . The only difficulty will be that it's too easy." I wish this were true. In the first place, we must be aware of the extraordinary, perhaps insuperable, difficulty of assessing the quality of a culture of which we are a part or of assessing the quality of a culture of which we are not a part. In using other cultures as mirrors in which we may see our own culture, we are affected by the astigmia of our own eyesight and the defects of the mirror, with the result that we are apt to see nothing in other cultures but the virtues of our own. During the twentieth century machine industry has made it possible to amass enormous quantities of information evident in encyclopedias, histories of civilization, and quiz programs. The concern with the study of civilization in this century is probably a result of the character of our civilization. Certainly such studies reflect our civilization. Spengler, in *The Decline of the West,* could not have been uninfluenced by the position of Germany, nor could Toynbee free himself from the traditions of English-speaking countries, nor could Kroeber escape the influences of the United States and the obsession with the objective qualities of science. I shall assume that cultural values—or the way in which or the reasons why people of a culture think about themselves—are part of the culture.

It is perhaps a unique character of civilization that each civilization believes in its uniqueness and its superiority to other civilizations. Indeed this may be the meaning of culture; i.e., something which we have that others have not. It is probably for this reason that writings on culture can be divided into those attempting to weaken other cultures and those attempting to strengthen their own. The emphasis of St. Augustine on original sin implied an attack on those representing the secular state, as the emphasis of John Locke on the *tabula rasa* was the basis of an attack on ecclesiastical hierarchy, and the work of Spencer on progress the basis for the supremacy of Anglo-Saxons. "Reason is and ought only to be the slave of the passions and can never pretend to any other office than to serve and obey them"—a statement as true of this quotation and of Hume's writings as of others. Perhaps the obsession of each culture with its uniqueness is the ultimate basis of its decline. Dean Inge has remarked that civilization is a disease almost invariably fatal unless the cause is checked in time. The Hindus and the Chinese have survived by marking time.

I

A brief survey of cultural development in the West may indicate the peculiarity or uniqueness of culture and elements which make for duration and extension. Cultures will reflect their influence in terms of space and in terms of duration. How large an area did they cover and how long did they last? The limitations of culture, in point of duration, are in part a result of the inability to muster the intellectual resources of a people to the point that stagnation can be avoided and that boredom can be evaded. The history of boredom or stagnation has yet to be written, but it might well include the story of the ostracism of Aristides the Just on the ground that the Greeks became weary of hearing him called "the Just." Hume wrote that "when the arts and sciences come to perfection in any state, from that moment, they naturally or rather necessarily decline and seldom or never revive in that nation where they formerly flourished." Intense cultural activity is followed by fatigue.

The facility of concentrating on intense cultural activity during a short period of time and the capacity to mobilize intellectual resources over a vast territory assume to an important extent the development of armed force to a high state of efficiency. Cultural activity, evident in architecture and sculpture, capable of impressing peoples within a wide area, is designed to emphasize prestige. It becomes an index of power. A concern for continuity, the biological limitations of the patriarchal system as a basis for dynasties, and the difficulties of maintaining a high cultural level over a long period of time, will involve an emphasis on types of architecture calculated to reflect a control over time as well as over space. The pyramids were an index of power over time but dynasties represented by them were displaced and in turn new dynasties concentrated on new monuments to enhance their prestige. Old capital sites scattered along the Nile Valley were a tribute to the demands of successive dynasties for prestige. The Egyptian empire was a tribute to their success. But such monuments as capitals with tombs, palaces, temples, and sculpture were expensive and did much to bring the empire to an end. Political power reflected in capitals was supported by such cultural activities as writing evident in successive bureaucracies.

Civilization in the Tigris and Euphrates valleys developed along lines similar to that in the Nile but solutions to the problem of time appear to have been reached before the problem of space and organized force became acute. Religious communities with hierarchical organizations characterized Sumerian civilization, and while architecture dependent on bricks made from the clay of the delta regions became important, writing on clay was a basis for communication, administration, and trade. Organized force represented by Sargon of the Akkadians brought religious communities under control and with access to writing became the basis of a vast empire. With religion based on writing, Sumerian culture proved sufficiently strong to throw off control of a foreign ruler and to support a capital at Ur for a limited number of dynasties. In turn this culture came under the control of fresh conquerors and a new capital of palaces and temples emerged at Babylon. The effectiveness with which control over time reflected in religion was fused with control over space was evident in the long period in which Babylon persisted as a capital under the Kassite dynasty.

The success of organized force was dependent in part on technological advance—notably in early civilizations—in the use of the horse, the crossing of the light African horse with the heavier Asiatic horse, and the introduction of horse riding and cavalry to replace horse driving and chariots, and the use of iron as a substitute for bronze. The Hittites with the use of iron succeeded in building an empire with a capital which emphasized sculpture and architecture but which was checked on the south by Babylon and on the north and west by the Greeks with their control over the sea at Troy. They were followed by the Assyrians who exploited technological advance in warfare and made fresh contributions to its development. With a new capital at Nineveh they succeeded in offsetting the prestige of the Nile and of Babylon and establishing an empire to include the civilizations of both. Prestige was based not only on architecture and sculpture but also on writing. The library became a great instrument of imperial power and set an example which has influenced the history of the West until the present time. The concern of the Assyrian empire with the collection of Sumerian documents for the library at Nineveh has been paralleled at Alexandria, Rome, Paris, Berlin, London, Moscow, and Washington. In Canada we are attempting to follow in our own way at Ottawa. The Assyrians not only attempted to maintain their prestige by libraries but also by development of a reputation for warlike ferocity paralleled in this century. Failure of the Assyrian empire was in part a result of the tenacity and diversity of civilizations in Babylon and Egypt.

Persia succeeded where Assyria had failed by emphasizing the importance of a single capital by architecture and sculpture and the importance of small capitals of districts or satraps governed from a center. The beginnings of the principle "divide and rule" were evident in recognition of the religions of Babylon and Egypt and encouragement of the religion of the Hebrews at Jerusalem. But as in the case of Assyria, the political organization of Persia was unable to meet the demands of continuity.

Political organizations determined to an important extent by the limitations of armed force and characterized by centralized power emphasized the capital city and left their impress on cultural activity in architecture and sculpture. They emerged in land areas and extended from the Nile Valley to Asia Minor. They provided a shelter for the development of communication facilities and the growth of trade, such as that of the Arameans on land and of the Phoenicians on the Mediterranean. Communication was subordinated to the demands of centralized power in religion and in political organization and was characterized by the use of the eye rather than the ear. The scribe occupied a strategic position in centralized bureaucracies.

II

In attempting to use other civilizations as mirrors by which we may understand our own, we are exposed to much greater dangers in studying Greek culture and its successors since our own culture has been profoundly influenced by it. Civilizations of the Nile and Asia Minor had a limited influence on peoples among the north shore of the Mediterranean. Minoan civilization was an attempt to encroach on the sea which failed in the face of opposition from the north. Mycenean civilization on the mainland proved more adaptable but in turn succumbed. The Greeks escaped the centralizing tendencies of river civilizations with their effects on capitals, architecture, and sculpture and on writing with its implications to bureaucracy. With settlements on the islands and along the coast, civilization emphasized cultural aspects suited to the need of the Greeks. The oral tradition rather than writing provided a basis for the epic and for literature designed to unite scattered groups in a consciousness of Greek culture. The alphabet borrowed from the Phoenicians was given vowels and adapted to the demands of speech. The ear replaced the eye. With the spread of writing, the oral tradition developed fresh powers of resistance evident in the flowering of Greek culture in the sixth and fifth centuries. A concern with the eastern concept of the capital was emphasized in the age of tyrants in the sixth century notably in Athens and in the fifth century, notably in the Athenian empire. But as the epic and tragedy reflected the character of Greek civilization, so, too, did architecture and sculpture. "After art had been toiling in India, in Persia, and in Egypt to produce monsters, beauty and grace were discovered in Greece." (Sir

James Mackintosh) "Nothing overmuch" was a maxim which implied distrust of specialization in all phases of cultural life. Greek culture was destroyed in the growth of writing and of individualism in the latter part of the fifth century.

The vitality of Greek culture was evident finally in the flowering of military skill in the conquests of Philip and Alexander. Greek culture with its political organization reflected in the city-state came in contact with concepts peculiar to early civilizations and compromised with them in the Hellenistic kingdoms. The capital to a limited extent was restored. In Egypt the Ptolemies established a new capital at Alexandria and created a new deity to destroy the influence of the old capital at Thebes, and built up a library to exploit the limitations of Athens and to offset the influence of Babylon. At Pergamum, the Attalids developed a capital with a library designed to offset the prestige of Alexandria. The Antigonids were eventually defeated by a revival of Persian civilization.

In the west, along the north coast of the Mediterranean, Rome came under the cultural influence of Greece, and after destroying Carthage, which had inherited the commercial traditions of Phoenicia, extended her influence to the Hellenistic kingdoms to the east and to Spain and Gaul in the north and west. The influence of Egypt was evident in the deification of the ruler, in the decline of the Roman Republic and the emergence of the Roman Empire, and in the increasing centralization of a bureaucracy. The attempt to offset the influence of Persian civilization was evident in the orientalization of the emperors and eventually in the establishment of Constantinople as a capital to take advantage of the support of Hellenistic culture, including Christianity. The inroads of the barbarians were followed by the decline of Rome and the rise of Constantinople as a political center. The difficulty of subordinating cultural capitals with their roots in earlier civilizations reflected in the religious controversies of the period led to the emergence of Rome as the religious capital of the West, and to the spread of Mohammedanism in the East. With Mohammedanism, new capitals arose at Baghdad and at Cordova in Spain. Access to a medium other than papyrus and parchment, namely paper, enabled these centers to build up libraries and compelled Constantinople to take a fresh interest in learning. In the West the Holy Roman Empire became an institution designed to strengthen the prestige of Rome. In turn the political influence of Rome led to the increasing prestige of Paris as a theological center. The attempt of the papacy to recapture Jerusalem and the Eastern church in the Crusades was followed by the growth of small Italian city republics, notably at Venice, Florence, and Genoa. The final collapse of Constantinople and of the Byzantine Empire following the use of artillery in 1453 brought new efforts to regain prestige in the East at Kiev and in the West at Paris.

The capitals of the northern Mediterranean and Europe, while reflecting the influence of the capitals of the Nile and the Tigris and Euphrates valleys, were dominated by the oral tradition of Greece. The absolute monarchy of Egypt and the East became the Roman emperor, the English Tudors, Louis XIV, and the Czars of Russia; and its culture was evident in the courts of Rome and Constantinople, London, Paris, and St. Petersburg. The city-state of Greece was revived in the city republics of Italy and Germany and in the renaissance, and its influence softened the tyranny of the courts. In some sense the culture represented by the courts had solved the problem of time and space. The Byzantine Empire persisted as a unique achievement in duration, and while the size of its territory fluctuated, its achievement in the solution of problems of space was scarcely less remarkable. Paris became the cultural center of the West, notably under Louis XIV, and the influence of the French court was evident in the England of Charles II, in the courts of Russia, and indeed wherever culture in the Western sense raised its head. Antwerp, Amsterdam, London, Berlin, St. Petersburg, Moscow, and Washington were influenced directly and indirectly by the dominance of Paris. French culture persisted after the revolution and after the occupation of the recent war, and survived the state. Like Paris, London became more dependent on cultural influence than on political organization to refer only to the British Commonwealth of Nations.

III

After a brief survey of earlier civilizations we can attempt an appraisal of the possibilities in terms of duration and extent of our own civilization. We have emphasized the significance of communication in determining the characteristics of earlier civilizations and of changes in methods of communication. The discovery of printing in the middle of the fifteenth century implied the beginning of a return to a type of civilization dominated by the eye rather than the ear. With printing and an increase in the use and manufacture of paper, German cities strengthened their position and facilitated a break from the Church in Holland, Germany, and England. Their advance was registered in the concern for the word of the *Bible,* the Reformation, and the rise of Protestantism. The full impact of printing did not become possible until the adoption of the Bill of Rights in the United States with its guarantee of freedom of the press. A guarantee of freedom of the press in print was intended to further sanctify the printed word and to provide a rigid bulwark for the shelter of vested interests. Printing assumed mass production or reproduction of words, and once it escaped from the pattern of the parchment manuscript, it compelled the production of vast quantities of new material, including material to meet the demands of science and technology. Improvement of communication hastened the development of markets and of industry. The industrial revolution followed the printing industry and in turn in the nineteenth century with the use of steam power in the manufacture of paper and of printed material, supported rapid expansion of the printing industry.

We are perhaps too much a part of the civilization which followed the spread of the printing industry to be able to detect its characteristics. Education, in the words of Laski, became the art of teaching men to be deceived by the printed word. But there are unmistakeable signs that this is a civilization which partakes of the character of civilizations in its belief in its uniqueness and superiority over other civilizations. We are all familiar with the claims of the printing industry to the effect that it has ushered in a new and superior civilization. No other civilization, we are told, has enjoyed our advantages. Democracy, education, progress, individualism, and other blessed words describe our new heaven. At this point the water becomes swift and we are in grave danger of being swept off our feet by the phenomenon we are describing. We are in danger on the one hand of losing our objectivity and on the other hand of being placed under arrest. Freedom of the press has been regarded as a great bulwark of our civilization and it would be dangerous to say that it has become the great bulwark of monopolies of the press. Civilizations have their sacred cows. The middle ages burned its heretics and the modern age threatens them with atom bombs.

I have no preferences for martyrdom even to the extent of being refused admission to the United States and perhaps I should go no further. But I must venture concluding remarks in the hope that I may meet the President's interest in "stimulating discussion." In contrast with the civilization dominated by Greek culture with its maxim, "nothing in excess," modern civilization dominated by machine industry is concerned always with specialization, which might be described as always in excess. Economics, beginning with Adam Smith, and indeed other social sciences have an obsession with specialization. Specialization and industrialism support an emphasis on equality. An interest in material goods which characterized the Scottish people as represented notably by Adam Smith has been followed by an attitude described by Samuel Butler: "All progress is based upon a universal innate desire on the part of every organism to live beyond its income." The concern with specialization and excess—making more and better mousetraps—precludes the possibility of understanding a preceding civilization concerned with balance and proportion. Industrialism implies technology and the cutting of time into precise fragments suited to the needs of the engineer and the accountant. The inability to escape the demands of industrialism on time weakens the possibility of an appraisal of limitations of space. Constant change in technology, particularly as it affects communication as a crucial factor in determining cultural values (for example, in the development of radio and television), increases the difficulties of recognizing balance, let alone achieving it.

The cultural values of an industrial society are not the cultural values of other societies. The equation of ethical values between cultures is possibly more difficult than the equation of other values, though Professor V. Gordon Childe has described the implications of cultural change in fields of such abstraction as mathematics. Dean Inge has reminded us that the outburst of rich artistic activity in Greece coincided with a decline in the status of women. The extreme sensitivity of modern civilization (for example, in the attitude toward cruelty to animals and the extreme insensitivity toward unbelievable cruelty to human beings) has synchronized with the complete collapse of spontaneous and unconscious artistic production.

Anthropologists—notably Pitt-Rivers—have explored the dangers of the intrusion of one culture on other cultures. Historians have commented on the unsatisfactory results which followed the importation of the parliamentary system to the European Continent. The disasters which overtook North American civilization following the coming of Europeans have been described at length. The disturbances which have characterized a shift from a culture dominated by one form of communication to another culture dominated by another form of communication, whether in the campaigns of Alexander, the Thirty Years' War, or the wars of the present century, point to the costs of cultural change. The impact of Point Four on other cultures—the clash of so-called "backward" and so-called "forward" countries—involve such unpaid costs as the enormous loss of life directly through war and indirectly through cultural change. The spread of communism from France to Russia and China is a further illustration of the instability of Western civilization. Stability which characterized certain periods in earlier civilizations is not the obvious objective of this civilization. Each civilization has its own methods of suicide.

DEFENSE AND OPULENCE: THE ETHICS OF INTERNATIONAL ECONOMICS

By KENNETH E. BOULDING
University of Michigan

One of my favorite half-truths is that there is no such thing as the theory of international trade. There is, of course, a theory of trade-in-general. There is a theory of the location of economic activity. There is a general theory of the balance of payments (i.e., of monetary circulation). There is a theory of comparative advantage, which is, after all, merely a special case of the general theory of specialization. There is a theory of exchange rates, which is merely a special case of the general theory of exchange and markets. There is a theory of the geographical mobility of economic resources. None of these topics fits comfortably into what is usually termed "international trade." The theoretical parts of textbooks on this subject are a hodgepodge of stuff taken from monetary theory, location theory, exchange theory, and so on. Indeed, from the point of view of the pure economist international trade can almost be regarded as little more than a very bad statistical sample of the total volume of trade—a sample which happens to be collected at national frontiers. A shipment which goes from Detroit to Windsor is international trade; a shipment which goes from Detroit to California is not. If a world state were established tomorrow all international trade would disappear immediately. Practically all the problems connected with international trade would remain. It is evident that we are dealing with an arbitrary and almost meaningless segment of the universe, much as if we had set up a Study of Things Beginning with P, and written textbooks around peanuts, politeness, and peculiar people.

The trouble with half truths, however, is the other half. International trade is a by-product of the existence of the national state—an institution which may, to the economist, be arbitrary, but which is none the less real and which becomes more and more noticeable all the time. The economist's attitude towards the national state is symbolized in the fact that he calls its activity "intervention." The national state, that is, is not really part of the economist's universe. It is conceived as a capricious, though frequently as a benign, *deus ex machina* "intervening" in the "natural" world of private economic institutions and relationships with tariffs, taxes, quotas, price regulations, labor laws, and so on, but not really forming part of any larger universe. There is nothing in economics resembling a "theory of the state" in the way that there is a "theory of the firm." Unfortunately there is very little theory of the state anywhere in social science, not even in political science, which seems to be in much the same position today that economics might be in if there had never been anything but institutional economics since Aristotle. Consequently, the study of international relations (of which international trade is a part) is still almost entirely conducted at the level of high-class journalism, or at best history, without either theoretical foundations or empirical superstructure. The appalling nature of this gap in social science can be seen vividly if we contrast the kinds of answers which social scientists are able to give to the questions of how can be avoid depression and how can we avoid war. To the first question economists can give some kind of answer. By the second, social scientists are, or should be if they have any decent humility, struck dumb.

Nevertheless, Adam Smith brazenly called his great work "An Inquiry into the Nature and Causes of the Wealth of Nations," and almost half the work is given over to a discussion of the "Sovereign or Commonwealth" as an economic entity. Theories of defense, justice, public works, education, religion, the "dignity of the sovereign," taxation and public debt—all find their place. It is perhaps one of the great misfortunes of social science that the innumerable hints and suggestions in Adam Smith's superb Book V were never systematized into a "discipline" in the way that succeeding generations of economists perfected his more "pure" economics. A hint of a "theory of the nation" is given in the famous passage on the navigation acts from which I have taken my title: "As defence, however, is of much more importance than opulence, the act of navigation is, perhaps, the wisest of all the commercial regulations of England." The prime object of the policy of any nation is not the welfare of man, even of its own citizens, but is its own preservation. The welfare objectives are important mainly as the servants of defense. Any organization which obviously and clearly makes no contribution, or a negative contribution, to the welfare of those on whom it relies for support will not ultimately be defended. Hence over a large range of human activity "opulence" and "defense" are complementary rather than competitive goods. Nevertheless the nature of this relationship needs to be examined.

The concept of defense is important not only in the theory of the nation-state but also in the theory of all other organizations. We are beginning to realize in economics that a theory of the firm (or union or household or any other organization) which fails to take into account the political nature of all these organisms is seriously deficient for many purposes. Newer interpretations of business behavior, such as that of W. W. Cooper, which make the concept of "retaining control" central are closely allied to the theories of defense. It is not unreasonable to say that the main objective of the businessman is to stay in business, of the politician is to retain office, of the union leader is to keep his job, and of the saint is to maintain his sanctity—as long as these roles are satisfying to the individual performing them and no more alluring alternative role seems possible. The maximization of the welfare of the "clientele"—whether this is seen as the maximization of stockholders profit, of national welfare, of benefit to union members, or of the welfare of the church—is behaviorally significant mainly as it becomes part of the role which the executive sees himself playing. Even the exceptions to the above principle serve to underline its significance. The businessman who sacrifices his business to some high principle, the politician who would "rather be right than president," and the labor leader who sacrifices his union for a cause are themselves defending what in their eyes is a superior role to the one in which the world has placed them. The significance of organizations rests in the persistence of the roles which they create. Indeed, an organization might almost be described as a bunch of roles tied together with red tape. The role persists despite change of person (the king is dead—long live the king!) and it is the role that is defended rather than the particular incumbent who happens to be playing the part.

The concept of defense, therefore, is in no way peculiar to the national state but applies in some degree to all organizations. Nevertheless, the methods of defense of the national state raise acute welfare problems. The national state is almost the only organization, apart from criminal organizations, which employs violence as a regular and essential instrument of its defense. The defense of most organizations, such as businesses, universities, families, and churches, involves the maintenance of "attractive" power; i.e., the ability of the organization to draw people into relationships with the organization and away from competing organizations. Businesses live by their ability to produce goods which they can sell at prices sufficient to enable them to hire resources. Very rarely do they employ violence, and the occasional "Pink" and thug is exceptional. Normally businesses can survive only by their ability to attract both customers and employees. The same is true of families, universities, and churches. The competition of these organizations is therefore in a very real sense competition in the satisfaction of human desires; that organization which can best satisfy these desires in its whole scheme of operations is most likely to survive. For this reason, "economic" competition has been for the most part highly beneficial, whether this has been the competition of businesses, universities, churches, or even of families, and tends to move the character of these organizations constantly in the direction of a better satisfaction of human need. There are some important possible exceptions to this principle, of course, most of which arise, I suspect, because of ignorance; i.e., an inadequate learning process. The patent medicine peddler, the sophistical cult, the parasitic family—all exist in the interstices of a noncoercive society. The principal characteristic of all these less desirable organizations is the ability to create the need which they satisfy—usually through the semi-coercive device of arousing fears—so that it represents in a sense a partial breakdown of the principle of defense by attraction.

Defense by coercion enables organizations to survive which are inimical to the welfare of man, in that the ability to defend an organization by coercion releases it from the necessity of defending itself by attracting voluntary support. Nevertheless, there are reasons for supposing that defense by coercion cumulatively diminishes the attractive power of an organization, and that it is therefore unstable in the long run, for coercion always has its limits. No organization can survive without some vestiges of attractive power, for men will not coerce merely for the sake of coercion. Unless they feel that the organization which they are defending is in some sense "worth" defending, the morale of the defenders will be undermined. Consequently the more coercion is used, the less sense there becomes in using it. Finally the organization simply withers away because of its inability to attract even the coercers—and somebody must always do the coercing. It has been said that someday somebody will give a war and nobody will come! The history of religious persecution is a good case in point. Coercion so undermines the attractive power of the persecutor that it eventually collapses from the sheer inability of anybody to get excited about the ideas which they are supposed to be defending.

It is highly probable that in our day the national state is similarly threatened with destruction because of its unstable reliance on coercive defense. Coercive defense has become increasingly unstable in modern society for several reasons. In the first place the maintenance of the security of a number of competing organizations by means of coercive defense implies the set of inequalities in which each organization be stronger than any reasonable combination of the others. Even in the two-organization case, this system is highly unstable. Strictly speaking, the inequalities—A is not weaker than B and B is not weaker than A—can only be satisfied by $A = B = 0$; i.e., by total disarmament. The only conceivable stable solution to a two-organization individual defense system is in a spatial system where the distance between the organizations is great enough so that each can be stronger than the other in its own backyard. This equilibrium depends on the proposition that the strength of any organization varies inversely with the distance from "home" at which it is conducting its coercive operations. Thus in 1900 it may well have been true that America was stronger than Japan in the East Pacific and Japan was stronger than America in the West Pacific. By 1945 this solution was clearly impossible, owing to the enormous reduction in significant distance. In a similar way, of course, social or economic distance may contribute to the stability of a defense system. This is probably the main reason for the development of caste systems.

The instability of national security in a world where distances are as small as they are today inevitably leads to an arms race and to war. Indeed, war may well be regarded as the normal relationship among nations. Because of the technical revolution, however, war is steadily undermining the ability of the national state to attract voluntary service and loyalty. In the eighteenth century it may be doubted whether war ever absorbed more than 10 per cent of national incomes. In the twentieth century a major war absorbed up to 50 per cent of national incomes. The reason for this change is, first, the tendency of any system of national defense, because of the essential instability of the national security system, to be "insatiable," up to the limit which the system can support, and, second, the constantly increasing proportion of the social product which represents "economic surplus" which is available for social purposes, whether for welfare, fecundity, waste, or war. Even in the eighteenth century it took 90 per cent of a nation's resources simply to keep it going. In the twentieth century we can keep ourselves going with less than half our resources, and hence can spare—and in a system of national defense will be forced to spare—half or more of our resources for defense. Consequently war, which even in the Napoleonic era could almost be regarded as a peripheral phenomenon (we recall that the novels of Jane Austen were written in the midst of the Napoleonic Wars) except for those areas where the battles were actually fought, in the twentieth century has become an institution which reaches down into the lives of almost every individual in the society. Defense on this scale, however, cannot be undertaken without the development of the coercive power of the state against its own citizens. Military conscription is the entering wedge; industrial conscription, both of labor and capital, follows; and in the interests of its defense a society transforms itself into a coercive society in which the market is abolished, in which the carrot of incentive is everywhere replaced by the stick of coercion, and in which fear rather than hope becomes the ruling motive. We saw this happen in Germany and Russia. We are watching it happen in America before our own eyes. It is a strange paradox that the American Legion, with its ideology of "toughness" and its faith in the power of fear, is probably one of the principal agencies making for an American version of the communist state, for once the principle of internal coercion is accepted in military conscription, the major barrier to the conscription of both capital and ordinary labor in the interests of national defense has fallen.

One thing coercion cannot command, however, and that is affection. Because the coercive organization does not have to rely on the power of attraction, it loses that power; and because it fails utterly to serve human needs and human welfare, eventually nobody can be found to play the roles which it creates and it collapses, to be replaced by organizations which have greater power of contributing to human welfare. It is only in the short run, then, that defense is more important than opulence. In the long run defense without opulence defeats itself—opulence, that is, in the sense of "ophelimity" or welfare.

What has all this to do with either ethics or international economics? Ethics is concerned primarily with the "good" (i.e., with the ultimate standards for judging welfare) or "profit" in the sense of "what shall it profit a man to gain the whole world and lose his own soul." The ethical parameter—that quantity which is increased when things get "better" and decreased when things get "worse"—is not to be identified with any other single parameter—neither with wealth nor power nor peace nor glory nor even survival. There is no reason to suppose, in the language of ecology, that the "best" system is the climactic ecosystem, and it may be that an essential ingredient of the defense of the "best" is an occasional catastrophe, just as the southern pine forests must be cut down every so often if they are to persist! The ethical parameter (goodness) is a function of a large number of other subordinate goods and bads. Whether this function is an objective reality is beyond the scope of this paper to investigate. Nevertheless, the function is neither purely arbitrary, nor is it merely a matter of taste. It is a proper subject of discussion, and that discussion can be fruitful, even though it is unlikely to result in universal agreement.

My contention is that the principal ethical confusions into which we seem to have fallen in the past hundred years are due to a confusion of the public-private value scale with the coercive-noncoercive value scale. The world has become extremely sensitive to the virtues of "publicness." There are good reasons for this. Virtually all religious systems denounce selfishness. A devotion to the general welfare is properly regarded as high in the scale of virtue. Consequently, organizations which are public rather than private such as the state are perceived with an aura of approval which private organizations, especially businesses, do not possess. The Coca-Cola corporation may in fact go around the world quietly doing good—cleaning up water supplies and providing people with moderately innocent refreshment. It is almost inconceivable that men should fight or die for it; it inspires amusement rather than respect, at best tolerance rather than affection, at worst an active resentment. National states rampage around the world noisily doing evil—destroying the innocent and ravaging the earth. Nevertheless they command the love and devotion of millions, and inspire self-sacrifice and martyrdom on a scale unknown even to religion. The tragedy of the twentieth century has been that the moral force which is generated by the appeal to publicness has to a large extent reinforced the growth of coercive rather than noncoercive organizations. On the whole privateness has gone with noncoerciveness and publicness with coerciveness. It has been the failure to realize this connection which has led us steadily towards the trap of a coercive society, whether communist or military. Public coerciveness has grown because it has been able to take advantage of its public nature and has kept its coercive nature hidden. Private noncoerciveness has declined because it has failed to exploit the moral advantage of its noncoerciveness and has been undermined by the moral weakness of its privateness. Worse still, private organizations have allied themselves with the coercive and have thereby rendered them utterly vulnerable to ethical attack. The private-coercive stands at the very bottom of the ethical scale! The alliance of business with military power and ideology is the factor more than any other which has made a private society untenable and has undermined the ideological foundations of capitalism.

In hardly any other sphere are these principles more apparent than in the field of international economic relations. In a noncoercive world society the proposition that there was no such thing as international trade would be a whole truth. Probably the closest approximation to this condition was found in the nineteenth century—a period which in this age of terror evokes almost a nostalgia for a golden age. It was an age when moderately economic men went quietly about the earth improving communications and spreading improved techniques, providing employment, and taking risks by building railroads, dredging harbors, planting tea, selling little things that little people wanted, without any more pernicious ulterior motive than private gain—a motive which compared with the subtle and sinister motives of national states seems remarkably high on the ethical scale. It was an age even when the gold standard represented a real modification of national economic sovereignty in the interests of a world order. It is easy, of course, to paint too rosy a picture of any golden age, and it is true, also, that the nineteenth century, by failing to evolve an ethical ideology which could sustain it, produced the discontents which destroyed it. The tariff represents an ancient alliance between the private interest and the coercive state. Economists have always been able to show that a tariff could be in the national interest. The case for free trade has always been a moral one and has rested ultimately on the ideal of a noncoercive society. Once the principle is admitted that the coercive power of the state can be used to protect a private interest against other private interests, there seems to be no logical resting place short of a coercive society in which the competition of organizations in the satisfaction of human needs and the attraction of human loyalties is replaced by the struggle to capture the instruments of coercive power. In this regard the utter failure of conservatives to conserve what is worth conserving is one if the depressing spectacles of human history.

The days in which the tariff was the main instrument of coercive power in this field, however, really belong to the golden age itself. A tariff, as Bastiat pointed out, is little more than a negative railroad—a device to increase the cost of transport (one way) between two places as a railroad is a device to diminish it. There is even a general-interest case for tariffs on the grounds that people can be too close to each other for satisfactory relationships, and that there is some sort of optimum social or economic "distance" in terms of the kind of strains and extreme specializations which "closeness" brings. The quota or quantitative restriction is, as all economists know, a more pernicious device, based as it must be on a historical base and tending to freeze ancient and out-of-date relationships. More significant than this, however, is the growth of state trading and investment itself. We are rapidly approaching the day of the complete socialization of international trade, when it will consist wholly of barter, gifts, or investment between nation-states, and will become almost indistinguishable from warfare. The nightmarish possibilities of unstable oligopolistic competition which such a prospect opens out are familiar to all students of the theory of competition.

Lest I be accused of being either an anarchist or a complete pessimist, I will conclude the paper on a note of faint hope. The way out of our present impasse seems to be surprisingly clear. It lies in the development of organizations of both public and noncoercive character. There is no necessary reason why the scale of possible organizations should stretch only from the public-coercive to the private-noncoercive corners of the field. We know that it is possible to have private-coercive organizations (gangs). It is possible also to have public-noncoercive organizations. The public character of an organization depends on the extent to which the population with which it is concerned conceives itself as "belonging to" or in some sense "inside" the organization or, looked at from the point of view of the organization itself (which is not quite the same thing), on the extent to which those most immediately participating in the activity of the organization regard themselves as responsible to, or representative of, the less active participants. Thus the significance of the development of democratic institutions is that on the whole the national state has become more public and as a result we have moved from *L'état c'est moi* to *L'état c'est nous*. This is a real gain. Nevertheless, from the point of view of the world at large the national state remains a largely private institution—even the democratic state. In spite of the fact that the policy of the United States, for instance, profoundly affects the welfare of almost the whole of humanity, neither the government nor the people of the United States feel much ultimate concern or responsibility for the welfare of non-Americans, nor do non-Americans feel much sense of participation in the activities and policies of the United States. There are hopeful signs, however, that a rapid extension of publicness beyond the boundaries of national states is in progress. This is reflected, not only in the development of international organizations, but also in the development of such institutions as the British Commonwealth, the "Good Neighbor" policy, the Marshall Plan, and Point Four. These involve something a little more than defense, though it is true that they generally have to be sold under that label. They represent a dim recognition of the genuinely public (i.e., world-wide) responsibilities even of organizations like national states, which are organized essentially on a private (i.e., a limited) basis of political franchise. The main difficulty with these movements so far is the weakness of the political institutions through which they are carried out. It is not enough to feel responsible *for*. One must be responsible *to*, otherwise the very feeling of responsibility is apt to corrupt the relationship of responsibility into either appeasement or condescension. In this respect the Marshall Plan, for instance, and Point Four represent a considerable retrogression from the excellent principles of UNRRA.

There is hope, also, that as public organizations become more truly public they will become less coercive. It is another prime virtue of the democratic process that insofar as it promotes genuine discussion (a process which involves listening as well as talking) it also promotes consensus and therefore consent. Government, then, is not necessarily synonymous with coercion. Coercion, indeed, may properly be regarded as a breakdown of discussion (you cannot argue with these people!) and hence as a breakdown of political process. There are several indications that we may be on the verge of important discoveries in the techniques of political process. From fields as diverse as group dynamics, child psychology, and industrial relations evidence is accumulating in regard to successful noncoercive techniques of human relationships. If we can begin to apply some of these techniques to international relations, where we are still committed to a blind toughness, there may yet be some hope of redeeming the national state in a blessed union of defense and welfare. Failing these discoveries, the national state, which can at present provide neither peace nor welfare, nor security nor honor, would seem to be doomed as being just too expensive to keep up. Under those circumstances the only alternative might well be a world tyranny of one complexion or another, where international economic relations become largely a matter of naked exploitation. Even a new Rome, however, would not last for ever, and it is not unreasonable to hope for a noncoercive, public world order being hammered out of the present time of troubles, however prolonged.

APPENDIX

The ethical theory of this paper can be illustrated by means of an indifference-curve analysis. In Fig. 1 we measure some index of "publicness" or "privateness" along one axis, and some index of coerciveness or noncoerciveness along the other. In this field we can draw a set of contours of an ethical-parameter function, G_1, G_2, etc., each representing combinations of the subordinate "goods" which are regarded as equally "good." In the figure we suppose this function rises as we move upwards and to the right; i.e., noncoerciveness is regarded as "better" than coerciveness and publicness is regarded as better than privateness. The opportunities open lie in some kind of a limited field. In this case there is no need to limit the opportunities to a line. We suppose in Fig. 1 that the dotted line encloses all possible opportunities. We suppose that this area is long and narrow and slopes generally from the private-noncoercive region to public-coercive region, indicat-

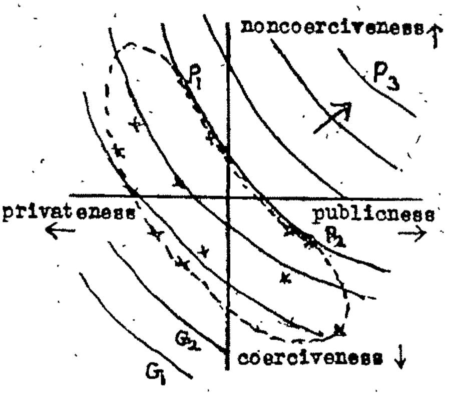


FIGURE 1

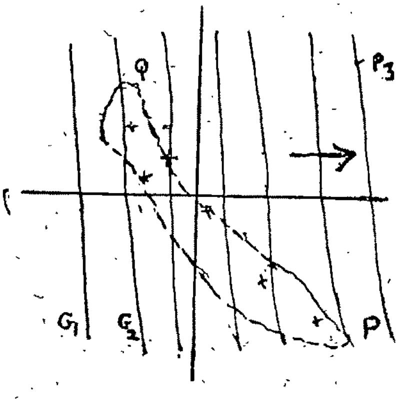


FIGURE 2

ing in general that these qualities are roughly correlated. The "best" opportunity is, of course, that which lies on the "highest" indifference curve. If the opportunities are correlated in the same direction as the slope of the indifference curves, a state of ethical confusion or indifference may arise. Thus in Fig. 1 points P_1 and P_2 represent equally good situations, though one is high in the private-noncoercive field and the other is high in the public-coercive field. Suppose now that great weight is given to the ethical value of publicness but that little weight is given to the ethical value of noncoerciveness. The indifference curves will be steep, as in Fig. 2, indicating that goodness rises rapidly with increased publicness but rises very slowly with increased noncoerciveness. In this case a point such as P is likely to be regarded as the best of the opportunities, lying at the extreme of both publicness and coerciveness. This seems to be the communist case! If the indifference curves are flat, indicating a high sensitivity to noncoerciveness and a low sensitivity to publicness, a point such as Q at the opposite end of the range of opportunities may be chosen. In all cases, however, a broadening of the opportunity area is likely to lead to better situations. Thus if a point P_3 in the public-noncoercive quadrant becomes available, it is likely to be better than the previous opportunities.

This method of analysis of ethical judgments seems to be quite general. Any subordinate goods and bads can be measured along the axes. Most of the properties of the figures also survive the limitation that almost all goods and bads are ordinal magnitudes, or at least something less than cardinal magnitudes. These problems of measurement, however, are beyond the scope of this paper.

DISCUSSION

Carl F. Taeusch: The temptation is too great to be resisted of emphasizing the significance of the topic—indeed, of topics scattered throughout the entire program—which recognizes that economics is functionally related to a living society. Most welcome in the papers of this session are such terms as human values, cultural values, and ethics.

A further question is implied: Should economics remain merely an instrumental science, leaving to others the formulation of ends? Just a decade ago, the U. S. Department of Agriculture called in various groups—economists, historians, sociologists, natural scientists, philosophers, etc.—to advise it critically regarding programs and policies. Only the philosophers responded with constructive suggestions. All others, including the economists, insisted that this was not their function but that, once others had determined the goals, they themselves would discuss the best means for accomplishing them. Plato was once confronted with the same problem: Granted that there are means of reasoning from premises to conclusions, who determines the premises? He listed the following: philosophers, religious ecstatics, poets, lovers, drunken people, and the insane! Is it asking too much that the economists join this group? The alternative is that the people listed by Plato will determine the framework of reference for the universe of discourse of the economists!

A more particular implication of the topic is the evident departure from the traditional conception of the disparateness of economics and ethics in which anything associated with business and economics was regarded as *ipso facto* immoral and anything moral or ethical was presumably uneconomical. Schumpeter pointed out how a doctrine of "usury" could develop for centuries amid practices directly to the contrary. Henry Steele Commager similarly asks why American capitalism has found so few competent defenders among the writers of America. To explain this by saying that businessmen and politicians do not read or write requires the complementary statement that too many of those who concoct the doctrines do not engage in business or government. The retreat to the "ivory tower" may merely provide a bower for intellectual incest.

It seems to me that Bennett has made appreciable improvements on Colin Clark's "calculus of evaluation" of international disparities on consumption levels. And his gracious acknowledgment of Joseph Davis' distinctions between "consumption levels," "consumption standards," and "standards of living" enhances the significance of Bennett's contribution. There is no point in entering into an internal, analytical criticism of the paper; the author has done this himself in a commendable degree. But Bennett would be the first to acknowledge that the increased exactitude he has achieved is not a warranty for the adequate coverage of the problem. But it must be remembered that the major objective is the determination of international policy. Bennett's proposal merely contributes instrumentally a partial approximation for measuring our relative international obligations.

In order to determine policy, we need also to weigh the emotional attitudes supporting or opposing U. S. aid abroad. There is also the need to weigh the American pragmatic attitude that something can be done about anything, including any and all problems differentially confronting foreign nations. There are also the more measurable details of the Monnet Plan, outlining the needs of France, and the Krug Report, determining what we can afford. Nor can we exclude the modern form of Metternich's principle of "legitimacy" as applied to such extreme forms of government as those of communist China and fascist Spain; or intermediate stipulations to be considered as to the internal policies of socialist Britain. Even a rough approximation to the measurement of these imponderables would be preferable to their complete omission from the calculus.

Certainly the fact that the indices of consumption levels for Britain and France range from 5 to 7 times those of China and India requires an explanation as to why most of our aid should not go to the latter. I suggest that Bennett's "amplifying factors" are not qualitatively distinct enough to warrant his use of the separate concept, which could be better used for designating the imponderables of the situation. Policy formulation may also require the use of minus quantities; Bennett has none in his scale. But even the potentials of restoring heavy industry in Germany require some minuses as well as pluses to represent her "lining up on our side" or "being against" us in a final show of loyalties.

This is apparently what Boulding has attempted to do. But, with all respect to his other accomplishments in economics, it seems to me that his paper exhibits the very faults he is attempting to avoid. One looks in vain for resolvable comparables, let alone commensurables. His criticisms of political science could be equally applied to economics, and he does apply them to "pure economics." But economists were not excluded from the "impure" realm; they voluntarily abdicated. Rereading Adam Smith's "Introduction," one finds no such abstraction. There *The Wealth of Nations* is identified with the productive capacity of the people and is pursued into every pertinent area; even the last book of his classic can be read in the light of its integral relation to the rest of the work and not as an afterthought. One is forced to conclude, from Boulding's paper, either that ethics is a more adequate parameter for approaching human problems, leaving to noneconomists the formulation of ends and policies, or that the restoration of political economy should be the starting point of a process of more adequate coverage. The latter seems to me preferable to the synthetic reconstruction of a fallen Humpty Dumpty from a few shell fragments now constituting laissez faire. Even "opulence" and "defense," which Boulding asserts are not competitive but complementary, are so in an integrative and not additive sense.

Consider the use of "the productive capacity of the people" as an operationally functioning concept to determine the goal of international policy. In a most practical sense, this could determine whether we should furnish people abroad with capital credit and machinery rather than with relief in the form of consumable goods; and Bennett's calculus could determine how much, even of consumption goods for building up productive labor capital.

Here is a measurable key for determining whether we should export wheat or flour or biscuits; and even whether the city of Seattle should accept the low bid presented by an Italian firm for supplying electric generators. Determination of public policy is a direct and continuous implication of the analytical determination of needs; and I see no reason why the economist should rest content with only the latter. To assert further that the economist is not responsible for the ignorant and prejudiced American attitude toward such monstrosities as the protective tariff is merely one more admission of the "ivory tower" point of view. The economist is as responsible for assuming the educational implications of his science as he is for transcending alleged subject-matter boundaries which otherwise cut him off from pertinent ecological factors. Indeed, the reflexive results of considering such problems of broader policy would enhance the more accurate as well as adequate appraisal of allegedly "internal" problems of economics.

What has been illustrated by reference to international problems applies equally to domestic problems. Our centralization of industry has been too uncritically accepted by economists; their resort to the ground of comparative advantage fails to distinguish between the initial advantages themselves and the subsequent cumulative effects that have nothing to do with the original principle. The exception which proves the rule is the more recent emphasis on considerations of military strategy. No such factor should be completely determinant; but all should be considered. Our faults in properly assessing the Tennessee Valley Authority or the social costs of business and industry lean more toward inadequacy than toward inaccuracy. Even a gross approximation to the measurement of human and social values would be preferable to disregarding them altogether. We need our economists in order to demonstrate the absurdity of administering the Homestead Act west of the Mississippi, to break down the legal obstacles against primogeniture in land ownership, to determine a sound balance of agriculture and industry.

My philosophical confreres often ask me: "Is this ethics or is it business?" So the members of this Association may likewise wonder: "Is this economics or is it social morality?" For both, I have the same answer: "I care not what you call it; but here is the problem." If that be treason, make the most of it!

WALTER A. WEISSKOPF: To comment on a paper as brilliant as the one we heard from Dr. Boulding is rather difficult because of its wealth of thought. The following ideas seem to me of special importance: that we suffer from a "confusion of the public-private value scale with the coercive-noncoercive value scale"; and that in the long run, no sociopolitical system can survive without providing for the "welfare" of its members.

The discussion of these problems has suffered from an oversimplified approach to such concepts as public and private and coercive and noncoercive. It is often assumed that the individual is a unity whose private attitudes are exclusively his own and in conflict with "public" values and that coercion takes place only from the outside. If this were true, the problem would simply be to eliminate external coercion and to devise a system which, like the purely competitive market, leads to a maximization of individual welfare.

However, modern psychology has rediscovered the fact, well known to antique philosophy, that the conflict between public and private rages also inside the individual and that there is such a phenomenon as inner coercion. Social, public values can become parts of the human personality structure in the form of internalized value-attitude systems. They are elements of the individual personality structure which are "shared by the bulk of the society's members" (Ralph Linton). They are the result of childhood experiences and of the authoritative influences in early life. The process of socialization of the individual consists mainly of the internalization of value-attitudes which make man want to do what he is required to do by the social system under which he lives (Erich Fromm).

These inner value systems may be in conflict with other human strivings and exercise an internal coercive influence. If vital drives are too severely repressed, basic human needs may be left unsatisfied and welfare may be neglected. Thus it becomes important to examine the inner value-attitude systems created by modern industrialism and its influence on personality structure and character orientation.

One can describe industrialism in terms of certain institutions: the factory system, machine production, large-scale enterprise, highly developed specialization and mechanization of work. A more holistic approach will have to consider the effect of these institutions together with the effects of the market and price system and of social mobility with its urbanization, absence of rigid class and group stratification, lack of tradition, and of its mass character.

The value-attitude system of industrial society is a syndrome of values, goals, ideas, and attitudes which can be represented by an ideal type construct. The attitudinal traits included in the model are not necessarily all present and operative with equal force in all individuals in industrial society. Relationships of a circular interdependence can be shown to exist between these value-attitude traits on the one hand and institutions of industrialism on the other hand, again keeping in mind that this represents a purely analytical dissection of elements inseparable in the wholeness of reality.

The great emphasis on technology in industrial civilization is interconnected with a positive evaluation of activity directed towards change and control of the external world. Hand in hand with this attitude goes the acceptance of "expedient rationality" (Howard Becker), a way of thinking and acting characterized by a strict separation of means and ends, by the assumption that ends are unequivocal, and by the belief that the economic principle (maximum effect with minimum effort) should be the only guide for action. The interconnection of this attitude with technology is obvious; there, goals are specific and determinate, ends and means clearly separated, and the economic principle can easily be applied. Quantification—the tendency to interpret interrelationships in nature and society in quantitative terms—is culturally interrelated with the money economy, but also with technology and a technologically oriented natural science. The use of mathematics in these fields has implanted in industrial man the inclination to interpret the world in quantitative terms.

The attitudes of externalization, quantification, and means-ends rationality have spread in industrial civilization from the economic, scientific, and technological spheres into other compartments of life. Externalization is reflected in the tendency of modern man to depend on external supports for his self-respect by pursuing such life goals as acquisition of possessions and power. Quantification leads to a neglect of qualitative differences between things and human beings. It is somehow opposed to the individualistic belief in the qualitative uniqueness of the individual. Under the impact of the quantifying tendency in the market, in production organization, and in technology, human beings become parts of masses and are treated as quantitative differentiations of a common denominator. Expedient means-ends rationality tends to undermine moral and traditional standards and thus has an unstabilizing effect on society and personality.

The growth of the market has been accompanied by the emergence of a value-attitude system, deeply ingrained in the minds of Western middle-class personalities, which elevates acquisition and accumulation of money and wealth to the dignity of a life goal. The striving for economic success through work in a socially sanctioned occupation is considered as a moral obligation. Economic success has to be accomplished by individualistic competition, at the expense of others.

A certain amount of "inner-worldly asceticism" was an important element in this value-attitude system in the early stages of industrialism which found its expression in the high evaluation of saving and the moral rejection of luxurious consumption. In the twentieth century the acquisitive attitude underwent a process of change and disintegration. Although still effective as an internalized value system, it is much weaker than it was in Victorian times. The shift from a positive evaluation of savings to a positive evaluation of spending and consumption is a symptom of this disintegrative process which, in economic thought, is reflected in the marginal utility school's emphasis on demand instead of on production and in the Keynesian emphasis on spending.

The character orientation of industrial middle-class man with his acquisitiveness, individualistic competitiveness, and with his work- and economic-success ethic, neglects what might be called the "human" needs for primary, warm, close, affectionate human interrelations. The arguments of economic theory that pure competition is socially beneficial and does not imply psychological competition will not eliminate the fact that the acquisitive, individualistic, competitive value-attitude system leads to hostile, aggressive, interpersonal relations. Industrial man, consciously or unconsciously, often considers not only his business rivals and other peers of his group as competitors but also his siblings, sex partners, neighbors, etc.

The emergence of the market system has undoubtedly increased the degree of mobility and thereby introduced a strong element of insecurity. The fixed niche which medieval society provided for the individual was eliminated. Social climbing and the acquisitive attitude, both part and parcel of one and the same value-attitude system, were, at first, characteristics of the bourgeois middle class. Climbing was executed predominantly in economic terms—social stratification measured in terms of money income. This led to a sociopsychological tie-up between money income, wealth, status, and self-respect (A. Kardiner). Social recognition became a function of money income and wealth—a situation, even in Europe, insufficiently alleviated by traditional status values such as noble birth, positions in the army, bureaucracy, etc. In the United States, in the absence of any feudal tradition, the interdependence of economic success and status became almost complete. Furthermore, the inevitable consequence of a value-attitude system, in which success in acquisition was interpreted as the result of competitive effort and individual worthiness, was that the unsuccessful person loses not only his means of subsistence and his social prestige but also his self-respect. In the flexible society the individual is not only insecure because he has no predetermined place but because any position, once established, is endangered by economic fluctuations, technological innovations, etc. The interdependence between economic success and self-respect deprives the unsuccessful individual of the latter at the very time when he needs it most.

Another factor which makes for insecurity is the limitlessness of the goals of climbing and acquisition. Industrial man cannot reach a point of saturation because, in the great majority of cases, there is always a higher position to reach and because economic success, as an end in itself, is a never-ending process. This makes the achievement of an internal balance difficult if not impossible. When can modern industrial man tell himself that he has achieved his goal? There is greatness but also much insecurity in his infinite Faustian striving.

The preceding analysis leads to the conclusion that the internalized value systems of modern man as molded by industrialism lead to the neglect of certain important needs. Inner contemplative values, moral standards, and tradition suffer under the impact of externalization and expedient rationality. The trend towards quantification undermines the belief in the uniqueness of the individual. The competitive drive for economic success generates an atmosphere of aggressive hostility in human relations. The social mobility and the unlimitedness of the goal of social climbing creates insecurity and makes difficult the preservation of self-respect in case of economic failure. The widespread social anxiety and unrest in present-day industrial civilization and the self-destructive trends towards war may be consequences of these factors. Therefore, Dr. Boulding's noncoercive public institutions will have to be shaped in such a way that they promote human welfare in a much broader sense than conceived before.

BROADUS MITCHELL: I particularly liked the last reflections in Dr. Bennett's paper where he said that improvement in consumption level is the important thing, and that contentment—supposing it is not mere stupefaction —is what counts.

Taking the body of his ingenious discussion, we have an array of more populous countries affording a comparison of higher and lower in levels of consumption. The place of a country on this scale depends on so many factors of resources, location, and history that the significance of the rating is in question. As Dr. Bennett has shown, it is hard to find indicators which are generally applicable.

May I suggest another way of going about it? This is to construct an index of economic waste by countries. Dr. Bennett has declined to include in his levels of consumption expenditures on armaments. For his purpose that is entirely proper. But if we push his own analysis farther we may inquire not simply into what different peoples have to enjoy but into the use which they make of their human and natural resources. In that view, devotion of goods and services to destruction would give a low rating. Extravagant slashing of forests, allowing topsoil to be sluiced into rivers and sea, and mining coal in such a way as to render part of the deposits irrecoverable are sins against consumption.

More reprehensible are instances of purposed destruction of goods ready for use, in which much labor and ingenuity have been embodied. Our national policy in America, in recent years, of making certain farm staples artificially scarce invites attack. Should a country enjoy a high rating for level of consumption while at the same time it is throwing potatoes on the fields to rot, plowing up growing cotton and tobacco, or dumping oranges in the ocean? Everybody knows the arguments that are offered for such conduct and the high supporting authority. We destroy in order to produce and have. Maybe you remember the incident of a man found poking a ten-dollar bill through a crack of a boardwalk. To his surprised questioner he answered that he had dropped a dime through the crack and was making it worth his while to take up the boards. In a grand comparison of nations in their consumption behavior such imbecility ought to figure as an offset to intelligence.

The proportion of national income devoted to armaments and war is the most meaningful item in my index of underconsumption. Here again, of course, there are arguments. The program on which America is now entering with such grim glee, if I may use the expression, is for "defense of peace," not for war. Every arming nation professes the same. But once more, if we are constructing an array of levels of consumption, of consumption capacity and enjoyment, do we not have to put a country with relatively high armament expenditures low on the list? We talk, with mingled patronage and pity, of the "backward" or, more politely, of the "underdeveloped" countries. But which is more worthy in the economist's eye—as Professor Innis has suggested—the boomerang as a weapon or the bomb? Which is more savage? The bomb evinces at best a more refined ignorance.

This brings me to Dr. Boulding's paper with his thoughtful observation that "the national state is . . . threatened with destruction because of its unstable reliance on coercive defense." Perhaps I mistake his meaning when he speaks of "the tendency of any system of national defense . . . to be 'insatiable' up to the limit which the [economic] system can support." One may argue that expenditure on arms, still more on war, is not supported by the economy, but supports the economy. My colleague, Professor Anatol Murad, in another place, has drawn the contrast—the most pertinent for our time—between warfare and welfare as claimants on productive capacity. In the capitalist definition, welfare is not diminished by warfare but is increased by it. If the presupposition of the economy is that of scarcity, then warfare is the sustainer of sufficiency, even the engine of progress. How does this reasoning apply to the Soviet Union and to other economies where, presumably, use and not abuse of resources is the aim? It depends on what the nation is trying to do. If welfare of its people is the object, then anything like aggressive warfare is surely a deduction from welfare. If the national purpose is that of creating a system of power, then warfare is again the sustaining element.

As both of these papers imply, we have come to the point where national economies do not exist as formerly. The criteria we have been in the habit of applying to national entities lose meaning in the progress of interdependence. At the very least we are compelled to consider what is economically appropriate for groups of countries; increasingly we come to intra-world problems.

If warfare is to cease to be, as we used to say, the by-product of welfare, or, more truly, if welfare is not to be the by-product of warfare, then we need Dr. Boulding's "noncoercive world society" as an imperative early realization.

FACTORS IN MODERN INDUSTRIAL DEVELOPMENT

AN ASSESSMENT OF THE ROLE OF THE HABITAT AS A FACTOR IN DIFFERENTIAL ECONOMIC DEVELOPMENT

By Preston E. James
Syracuse University

We are seeking to assess the importance of the various factors which combine to produce differences in the level of economic living from place to place on the earth. It is not possible to assume that the contrasts are due simply to difference of stage of development, and that the so-called "underdeveloped" regions need only to be helped along the course already charted by our most productive industrial centers. There are many factors underlying the observed differences: the inheritance of attitudes and objectives; the technological skills; the nature of the economic institutions; government; and also the factor of habitat—the environment in which the economy is developing.

The significance of the habitat as a factor in differential economic development cannot be understood or predicted from a study of the habitat alone. The basic fallacy of environmental determinism was the idea that the physical conditions of the habitat would always have the same significance whoever the inhabitants might be. Modern geographers start with the concept that the significance of the habitat is determined by the attitudes, objectives, and technologies of the people who occupy it. This means that in relation to any one society at any one period of economic history, the habitat may offer advantages or disadvantages, but with any change in attitudes, objectives, or technologies, the significance of the habitat must be reinterpreted.

The Habitat as a Total Environment. Social scientists are accustomed to taking things apart that in reality operate together. For very good reasons it may be necessary to concentrate on the study of the different elements of the habitat as things separate from the people, or to focus attention on the human institutions as if they were not intricately related to the habitat. But it is also necessary to try to put these things together again. The putting together of things analyzed separately is one of the most difficult jobs social scientists face.

The habitat and the people in it form a complex of interacting processes which are associated with a particular place on the earth. It is true that the face of the earth is made up of a great variety of different kinds of things, and the differences from place to place on the earth are the result of the operation of many different kinds of cause and effect processes. There are differences from place to place that are produced by physical processes, governed by the precisely formulated laws of physics and chemistry. There are differences produced by biological processes, governed by the only slightly less precise laws of biology. And there are differences produced by economic, social, and political processes, described, if not governed, by the concepts of human behavior. All these kinds of processes and the resulting differences which distinguish one place from another on the earth may be investigated separately. Yet, in reality, they operate in complex interrelation with each other, and the nature of the interrelation differs from one region to another.

What does all this mean in terms of our effort to interpret the meaning of the factor of habitat in relation to economic differences? It means that in discussing specific problem areas, general concepts of wide applicability may be less important than the careful analysis of unique situations. Each process at work on the face of the earth at any particular place and at any one period of time works in the midst of a total environment which is produced by all the other processes naturally but unsystematically associated in the same geographic area. Each process may be comprehended in terms of laws or principles, but the specific variations imposed by the conditions of the total environment are unique. The significance of the habitat and also the significance of the other items associated with habitat change with changes in any one of the elements of the total environment. Although conditions of the habitat are an essential part of the explanation of differences of economic development, the habitat cannot be used to excuse economic underdevelopment.

The Humid Pampa of Argentina

The Humid Pampa of Argentina provides an excellent example of the significance of habitat in economic development and, as it happens, an excellent example of a common type of error in the assessment of the role of the habitat. The Humid Pampa, forming the immediate hinterland of Buenos Aires, is one of the most productive parts of Latin America and is the economic heart of the one Latin-American country which is not classed as underdeveloped. The land is commonly described as possessing a high natural productivity—in fact this is one of the best endowed areas in the world for the low-cost production of meat and grain. It consists of a vast area of nearly level surface, with wind-deposited soils of great fertility in which continued high yields are possible without fertilizer, with a climate of mild winters, long summers, with an adequate rainfall throughout the year; and the whole region is so disposed that no part of it is more than 200 miles from a port accessible to ocean steamers.

The Humid Pampa is often described as a natural region; that is, an area which possesses certain common natural characteristics throughout in contrast to neighboring areas. The basic contrast which distinguishes the region from other regions is the fact that it receives enough rainfall to be called humid; beyond its borders to the southwest, west, and northwest, the vast nearly level plains continue but the climate is called semiarid. The amount of rainfall which approximately marks the western limit of the Humid Pampa in the northwest is about twenty-three inches; but because toward the south, where temperatures are lower, evaporation is also lower, the limit of the Humid Pampa in the southwest is approximately sixteen inches. It has become common to use approximately these rainfall lines under similar temperature conditions in all the mid-latitude regions of the world to distinguish humid climates from semiarid climates.

The Humid Pampa is almost all utilized for farming and grazing. Except for two groups of rocky hills—and certain marshy spots, which need not concern this analysis—the land is mostly fenced off into fields and used for pasture or crops. Alfalfa is the basic feed crop, and in order to prepare the land for alfalfa, tenants are encouraged to raise wheat, maize, or other grains. The whole agricultural area is well served by a network of railroads, leading to the several ports. All these features—pastures, fields of grain, railroads—reach the margin of the Humid Pampa and stop. Beyond, there are vast ranch lands used for grazing of animals on natural grasses, the population is sparse, and railroads are few. This looks like a perfect example of a natural region—homogeneous because of certain natural characteristics of the habitat—occupied to its nature-given boundaries by a kind of agricultural settlement. It has been commonly said that the limits of the agricultural region were determined by the rainfall. Here habitat sets the pattern, offers the opportunities, and man responds.

Yet it can be demonstrated that this interpretation is essentially false. Let us think, for a moment, of the natural conditions of this part of South America, say in 1600, some twenty years after Buenos Aires had been finally, and successfully, established. The Spanish settlers had much difficulty with the Pampa grasses, for with the relatively crude agricultural implements of that time the clearing of grass was a major undertaking. In all the world, with one or two puzzling exceptions, grass was conquered for agriculture only after the invention of the steel plow early in the nineteenth century. The region around Buenos Aires was not an exception. It was difficult to produce enough food to supply the struggling colony. The chief use of the land was for the grazing of cattle and mules, and this form of use was restricted to the zone along the southern and western bank of the Paraná River. To the south, the Humid Pampa—covered with grass that choked out all efforts to plant crops, lacking water at the surface and consequently poor for grazing animals—was left to the Indians. It was a land of low productivity in seventeenth century terms.

And was it then a natural region? Would a seventeenth century geographer, even if armed with all modern knowledge about the area, have outlined the present Humid Pampa and described it as possessing certain natural characteristics throughout, and in contrast to neighboring areas? Such a geographer could not have distinguished the Humid Pampa as it is outlined and described today. The fact that the land south of the Paraná shore and south of the zone of marshes beyond Buenos Aires was poorly provided with surface water was not a result of lack of rainfall but rather of the lack of valleys—the very nearly level surface. Water sinks into the ground instead of running off in streams. It would be available for a people who knew how to drill wells and could supply cheap windmills to pump it up, but the Spaniards of the seventeenth century did not know how to drill wells, nor how to build windmills in a land without wood. The fact that the climate was humid in terms of average annual rainfall was, in 1600, totally irrelevant. In terms of the character of the settlement at that time the distinction between humid and semiarid was not a factor in differential economic development.

The present agricultural settlement of the Humid Pampa is a product of the last century. It took perhaps twenty years after the fall of Rosas (1852) and the construction of the first railroad with British capital (1857) to fill in the outlines of the present Humid Pampa. Land which for three hundred years had been left to the Indians was in a very short space of time divided up into private holdings, plowed up, planted, and fenced. What had happened? The natural conditions of the habitat had not changed, but the significance of them had changed.

There were many changes in the world's economy and technology about this time. For the first time there were certain tools available which had never been known before. There were the steel plow and the large farm machines that made profitable the cultivation of large areas where yields were not high. There was a machine for drilling wells, and there were cheap, standard windmills. Also there was barbed wire. Without barbed wire it would have been impossible at any reasonable cost to fence off a treeless grassland into separate fields for crops and animals. And also there were steamships and railroads to provide cheap transportation of bulky products. Associated with all these new things, there was a very new kind of world economy developing. For the first time in history there were large concentrations of city people in need of food produced at great distances from the cities and able to pay for the food with factory products.

All these items of technology and of the economic environment arrived in remote Argentina roughly between 1860 and 1880. The same kind of process was working in most of the world's mid-latitude grasslands, including those of the Midwest of the United States. In all these regions a capitalist system of private property was established, and the process of occupying the grasslands created a vast amount of unearned increment. In the United States farmers on 160-acre farms divided the unearned increment widely; but in Argentina some three hundred families occupied most of the Humid Pampa and became very wealthy in the process. British capital was supplied to furnish the necessary equipment, and the British market absorbed the greater part of the new products.

Agricultural settlement spread rapidly to the south and west of Buenos Aires. The landowners were interested primarily in cattle, but they now had the big, clumsy English beef animals which had to be fed from a cultivated feed crop. Alfalfa did remarkably well on the Pampa, but to prepare the land for alfalfa it was found best to raise wheat; and to do this tenants were brought in and placed temporarily on the large estates. Wheat and alfalfa were pushed westward until decreasing yields no longer made the operation profitable. Where wheat and alfalfa could be grown profitably, the type of agricultural pattern characteristic of the Humid Pampa appeared; beyond, to the west, where the wheat yielded too little to pay a tenant to raise it and where the water table was too far below the surface to be reached by the roots of the alfalfa, the land was divided into large ranches and scrubby cattle were permitted to seek a living from the natural grasses. For the first time in history, the Humid Pampa could be identified as a region, and it was so identified by the Argentine geographers in 1875.

But is the Humid Pampa a natural region? What was it that stopped the westward spread of wheat and alfalfa? Was it the rainfall line, or was it the balance of costs and prices on the British market in the late nineteenth century? If the market price of wheat in those critical years had been twice as high, the alfalfa-wheat type of farming would have been profitable in drier country. Or, if the price of wheat had been half as high, the present limits of agriculture would not have been reached. The rainfall line, ranging from twenty-three inches in the warm north to sixteen inches in the cooler south, was made significant not by any inherent nature-made condition, but by the economic processes associated in that place at that time. Once the railroad pattern had been built—by 1910—it was not easy to advance farther to the west even with a rise in wheat prices. The so-called "natural limits" of the Humid Pampa were a reflection of the attitudes, objectives, and technologies of the inhabitants in a particular place and at a particular time. Even our general concept of what is humid as opposed to what is semiarid stems from conditions of the culture, not from conditions given by a "nature" which is thought of as having an existence independent of man.

This does not mean, however, that the character of the habitat can be omitted from the equation of differential economic development. The tremendous productivity of the Humid Pampa and the commercial vitality of Argentina are definitely related to the existence of a land with just the superlative qualities of this region. In terms of the attitudes, objectives, and technologies of the period from 1860 to 1914, this land offered unusual advantages. No understanding of the rise of Argentina to world importance can be had without reference to the conditions of the physical and biological environment in this remarkable region. But with every change in the attitudes, objectives, and technologies of the inhabitants, the land must be reinterpreted—both in its broader aspect and also in detail. The current idea of national self-sufficiency, coupled with the development of large-scale manufacturing industries in a land essentially tied to overseas markets and lacking local sources of fuel, brings to significance some disadvantages in the habitat which were not previously important. Argentina's status is not a matter of political organization alone, nor of imported European ideologies, nor of economically insecure five-year plans based on printing press money; but it is all these things undertaken in a habitat with specific properties which will make the familiar European processes add up to something new in a New World setting.

Differential Economic Development in Rural Brazil

Another example of the changing significance of the habitat is offered by the development of rural Brazil. When an American statesman nearly fifty years ago proclaimed that the twentieth century belonged to Brazil he was drawing the conclusion that a westward movement into the thinly settled backlands would produce the kind of economic development that the United States had enjoyed a few decades earlier. He simply overlooked differences in the habitat, and also differences in the basic attitudes of the people. More recently estimates of the population capacity of Brazil have been made which take careful account of the different characteristics of the habitat, but which take no account of the changing significance of these characteristics in the predictable future. Both the statesman and the population estimaters were guilty of a wrong assessment of the role of the habitat.

Brazil's Total Environment. The total environment in which Brazilian agricultural development has taken place includes a variety of significant items, no one of which is more fundamental than the traditional attitude toward speculative profits. For four hundred years the Portuguese-Brazilians have expected big returns for their investments, and lacking these big returns they have withdrawn from no-longer speculative undertakings to enter new fields of production. There is a long record of such products: sugar, coffee, rubber, cacao, and others. Each product was associated with a particular part of Brazil and also with a particular period of Brazil's economic history. As each product was developed speculatively, an area of concentrated settlement was built up rapidly; and as the product ceased to bring speculative rewards and the people with money went elsewhere, the older region and its economy sank into decadence. Brazil is dotted with poverty spots, where stranded populations work apathetically with eroded soils; and there are now, as always, boom spots where settlement is rapidly building up. Unfortunately, at the moment the chief boom spots are the cities where profits are from paper values rather than products.

How much of the Brazilian backlands can be considered to be arable? It is true that Brazil loses less of its total territory for potential agricultural development because of aridity or cold or mountainous surface than does any other large country in the world. It is estimated that 90 per cent of the national territory can be used for crops or pasture. But this estimate is based on agriculture carried on with the hoe. Very little of the Brazilian land is level or even nearly so. With hoe agriculture, the critical limit in terms of slope is about 35°; but if Brazil should adopt the plow and tractor, the whole picture would change. Instead of possessing a vast area suitable for farming, Brazil would be found to possess a very small area.

Conditioned by the speculative attitude toward economic endeavor, Brazilian agriculture has been shifting and unstable. In contrast to the feverish attention devoted to the temporarily prosperous commercial crops, the ordinary food crops, which bring no spectacular returns, are grown with a minimum of attention. Most of Brazil's soils are poor, for in the rainy tropics soils are heavily leached of their valuable properties. The best soils have been found to be those under the areas of semideciduous forest—that intermediate type of forest which is not so dense as the rain forest and not so thin as the scrubby thorn forests and savannas of the drier areas. For four hundred years the Brazilians have been practicing "fire agriculture" in these forests. The cycle is a simple one: the tenant farmer selects a likely spot, cuts and burns the trees, plants food crops (chiefly maize, rice, beans, or manioc) for two or three years, then plants pasture grasses and moves away. The large landowner uses the pasture without caring for it, and after a few years it has grown up again in scrubby brush. Vast areas of Brazil have been used and abandoned, some repeatedly. And since most of the semideciduous forests were on hilly land, these temporary farms have led to very heavy loss of topsoil, to floods and the lowering of the groundwater table. At the moment the areas of virgin semideciduous forest are almost gone. After four hundred years the time is coming soon when there will be no new areas to exploit. The frontier of pioneer farming has pushed farther and farther inland away from the urban centers; but it has been a hollow frontier, with the older settled land behind the frontier returned to pasture as the farmers move on.

Meanwhile, in other parts of the world great advances have been made in the technology of farming. Faced with the pressing need to produce more food at less cost per unit, the capitalist world has invested more and more in machines and fertilizers—changed agriculture from a small-scale individual undertaking, to a large-scale effort. It is now economically feasible to modify slopes with bulldozers, control drainage with laborsaving machinery, and to build soils with fertilizer and green manure. These techniques represent investment, and no speculative returns can be expected; but food can be produced in increased quantities and at decreased cost per unit. This is what Brazil must soon have, if its increasing urban population is to be kept from starvation and revolt. When enough Brazilians grasp the pressing need for this change, then a new attitude toward the land and toward agricultural enterprise will have been born.

What of the habitat then? How can we assess the advantages and disadvantages of the land in terms of modern, scientific agriculture? We must assume that the small farmer's hoe will be replaced by machinery and fertilizer. We are assured by soil experts that the original or natural mineral content of the soil and even its structure are no longer so basically important. With modern methods soils can be rebuilt, slopes remodelled, and the yields per acre can be enormously increased. There is no need to elaborate here the argument that, under these conditions, the factor of location with reference to market becomes more important than the natural conditions of the soil. If there is to be a large investment, not for speculative gain, but for greater quantity of production at lower cost, then areas close to the big urban markets have an advantage over more distant places. Once again the Paraíba Valley must be the scene of a new phase of Brazilian economic development.

What Must Be Known About the Habitat?

These two examples of the changing significance of the habitat as a part of the total environment of economic development illustrate the need for continued reinterpretation of the part played by the physical land. The examples have been presented in rather general terms concerning very large areas. There could be example after example of how this same principle works in detail. Even on a single farm, the different characteristics of soil, slope, and water from one field to another must be assessed, and the significance of these characteristics may change fundamentally with changes in the technology of the farm operations.

Are there any fundamental things, then, which must be known about a habitat in order to assess its role in differential economic development, or is each habitat a special problem, requiring special data and individual analysis? In the first place, the foregoing discussion should make it clear that geographers, who assume that part of their business consists in putting together things that the other social scientists have taken apart, cannot limit themselves to the investigation of the physical characteristics of the land alone. We have demonstrated that the significance of the physical character of the land can only be interpreted in terms of the way of living of the people. So habitat and inhabitants, from a geographic point of view, must be studied together. Each process must be confronted with its total environment if it is to be properly interpreted.

Geographers can list four fundamental kinds of data that are needed for the interpretation of the significance of the habitat. These are: physical land types; climates; density of population and pattern of settlement; and land use.

The physical land types are made up of associations of soil, slope, and drainage. A fundamental question at the start of any program of research is the definition of the categories of land types. In surveys on a large scale of small areas, such as the survey of Puerto Rico, it is not enough to use such general categories of land as plains, hilly lands, mountains, or plateaus. Some measurable limits must be defined. Are we to define such categories of slope as 0°-3°, 3°-8°, and so on? What sets the limits of these categories at 3° or 8°? In studies in North America it was found that slopes of more than 3° suffered from soil erosion when plowed, and that certain types of tractors were difficult to use on slopes greater than 8°. But in Puerto Rico different values are demanded by the nature of the habitat and the way of making use of it. Still different values are needed in Brazil. To the extent that categories of area differences must be examined specifically for each problem in order to select significant criteria, it is true that each area requires unique solutions. But in each area some study of physical land types is essential.

The same may be said of the other three kinds of data needed. Climatic categories which make use of the modern concept of the relation of evaporation and transpiration to temperature and rainfall are needed but are often difficult to apply because of the lack of recorded observations. Population must be mapped, not in relation to the arbitrary and often meaningless area units of the census, but in relation to the section of the earth from which the people derive their living, and in the definition of such areas the pattern of settlement must be examined. The density of population, not in crude statistical units, but shown with a degree of generalization which makes it comparable to the maps of physical land types, climates, and land use, is an essential part of the assessment of the habitat. Similarly, the land-use pattern must be based on defined categories with a degree of generalization which permits valid comparison with the other basic maps. Only through the analysis of the area relationships of these four basic characteristics can proper meaning and weight be assigned to the elements of the habitat as a factor in the differences of economic development from place to place on the earth.

INVENTION, INNOVATION, AND IMIΤΑΤΙΟΝ[1]

By YALE BROZEN
Northwestern University

Investigation of the role of technological change in economic growth is made easier if we examine it at three different levels: at the level of invention, of innovation, and of imitation. We are led to this approach quite naturally through the circumstance that movement in technology has been defined as a change in the production function and that this may have any one of three different meanings.

The production function, as an expression relating the quantity produced of a good (or goods) to quantities of inputs, may be used to express (1) what is technologically possible (the maximum output obtainable from any one of many sets of factors or the minimum inputs required for any level of output with any ratio between inputs), (2) what is possible with techniques that are (or have been) used in firms which are technological leaders, or (3) what is occurring in the economy as a whole. Technology, then, may change at any one or all of these different levels.

The level of technological possibilities, the level of the technological leaders, and the average technology of the society may move at different rates and in different directions. Usually the interlinkings of these levels are such that movement in any one is reflected in the others. This, however, is not necessarily the case. Directionally opposed movement can occur. Schumpeter has pointed out that invention (change in technological possibilities) may occur without innovation (change in the productive methods of technological leaders) and innovation may occur without invention. Similarly, innovation may occur without imitation or even in the presence of retrogression in the rest of the society.

The relationship of technological possibilities to technological leadership and of these to the average technology of the economy is a problem long neglected by economic theorists. Sociologists and historians have paid some attention to the gaps between these, but the static conceptions which so long dominated economic theory have caused it to neglect these lags. Economists have usually assumed fixed technological possibilities which actual practice would some day reach. Technological possibilities have never remained given, however, with the consequence that the economy was always in a state of transition while theory busily examined the equilibrium state.

---

[1] This paper was made possible by grants from the Rockefeller Foundation, the Social Science Research Council, and the Graduate School at Northwestern University. William Hamburger gave invaluable assistance in its preparation.

Determinants of the Rate of Imitation

Since one of our present policies in the sphere of international relations is that of decreasing the gap between the average technology of underdeveloped areas and our own practice, let us first analyze the economics of imitation. What are the factors that keep the actual technology of an area from approaching that practiced by the leaders in that area or elsewhere?

Cost of Changing Techniques; The Effect of Sunk Capital. One such factor is the cost of changing from an old to a new technique. This cost may be so great that it is more economic, from the social point of view as well as the private, to go on using old equipment. The cost of production with existing "backward" equipment or skills may be less than with advanced techniques requiring the formation of new equipment items and skills, particularly if the old type of equipment is fairly new, with low variable-cost of operation.

The rate of imitation of an innovation is slow, not only because of age distribution of old types of equipment and the difficulty of quickly extracting capital from specialized items, but also because the quality and cost of new types of equipment improve with the passage of time. The equipment is "debugged," and its price tends to drop. New techniques are often uneconomic, then, for many uses after they first appear but become economic after further development. They become economic not only because "bugs" are eliminated, thus reducing operating costs, and because the first cost is reduced, but also because the high obsolescence rate is reduced, thus reducing depreciation costs. This case is illustrated by the experience of British shipping firms in the twenties when marine engineering was changing so rapidly that firms in the highly competitive shipping industry delayed investment in the replacement of old high-cost engines by the new low-cost engines.

"Advanced" Techniques Uneconomic for Some Resource and Market Patterns. What appears to be an advanced technology may not be used by some enterprises because of differences in relative scarcities of resources available to different enterprises and differences in the scale appropriate to different markets. In that case, different technologies are appropriate to different enterprises. No one technique can be designated as best for all different resource patterns and all scales of production. Coal-burning, steam locomotives, for example, are still economic in coal-rich territories despite the development of Diesel-electric motive power.

Differences in relative scarcity of resources to different enterprises may occur within the same general social environment and resource milieu. Small firms, for example, find it more expensive to raise capital than do large firms. SEC studies have shown that the cost of raising capital is in excess of 20 per cent of the proceeds of security issues of small firms in contrast to less than 5 per cent in large firms. The cost of capital inhibits the use of "advanced" techniques by small concerns.

In designating some techniques as advanced and others as backward, no preference from the point of view of economy is implied. The so-called "advanced" techniques are categorized in this way simply because general usage seems to dictate that any production system which results in a high output (or value added) per head of directly associated labor shall be so designated. The high output per head is usually the result of the larger amount of capital used per worker rather than the consequence of inherent technological or economic superiority to other methods. As pointed out above, backward methods, when capital is scarce, are more appropriate and result in larger social output than the use of advanced methods in some industries with consequent capital starvation in others.

Accusations of technological backwardness have been leveled at American agriculture as a result of a naïve conception of technological superiority. Statements such as "maximum use of present available technologies in agriculture might mean an increase from 25 to 50 per cent in output"[2] are common. It is doubtful that such an increase in productivity could be realized without making more capital available as well as decreasing the gap between the actual technology and the economic level of approach to technological possibilities. Such estimates seem to be based not only on the implicit assumption of more capital provision but also on the assumption that no difference exists between the economic level of technology and the techniques that would be available if the industry were organized from scratch with all capital presently embedded in old equipment fully available for conversion into any form.

The Department of Agriculture seems to have realized that something more than improved technological possibilities and technological leadership are required to improve the economic status of farmers. It has not only used demonstration farms to show what improved methods can do and how to use them, but also to indicate the productivity of additional investment in such items as regrading for soil conservation purposes. By demonstrating the productivity of additional capital, it has made capital suppliers more willing to invest in farm loans.

Backward and Advanced Techniques Are Often Economic for Simultaneous Use. Even where enterprises operate in the same milieu of resources and markets, so-called "backward" techniques may be economically used by some while "advanced" techniques are used by others. This would occur, for instance, where there is not a smooth continuum from, let us say, handicraft techniques to power-machine techniques. Suppose that, after handicraft technique has been given all possible aid of additional capital, there is a large jump in the ratio of capital to labor in switching to power-machine technique, even when the latter is given all possible aid of labor. If the area in question is dominated by an industry with these technical characteristics and if the ratio of capital to labor supply in the area falls between the maximum ratio economic for handicraft operation and the minimum ratio worth using in machine production, then backward and advanced techniques are both best practice.[3] Both should be used (in proper proportion).

---

[2] *Technological Trends and National Policy* (U. S. Government Printing Office, 1937), p. 102.

Harry Jerome found that both handicraft and machine techniques were used in all the industries in the United States composing the sample he studied in 1925. He found the proportion of hand workers in cotton goods to be 12 per cent, paper 42 per cent, retail coal 46 per cent, and brick and tile 53 per cent, other manufacturing 45 per cent, highway construction 42 per cent, ferrous foundries 69 per cent, construction 78 per cent, bituminous coal mining 82 per cent, and stevedoring 80 per cent (*Mechanization in Industry,* N.B.E.R., 1934, page 275). Unless, however, each of these industries, or segments of them, operated in "areas" where each was dominant, the explanation must be found on bases other than that postulated above for a dominant industry since it is hardly likely that iso-quants in all these industries would have the same slope in the critical area of the "jump" from hand to power methods and that this should equal the slope of the budget line. The other factors causing appropriate technique to differ from firm to firm must, therefore, be used to account for this phenomenon.

Uneconomic Hindrances to the Spread of Best Practices. But while there are good economic reasons for not bringing the actual technology of an industry to the level of the technological leaders ("leader" defined as the user of the advanced technique), the actual technology may fall short of even the economic level. One reason for this is the ignorance of capital suppliers which prevents the flow of capital into superior uses embodying improved techniques. The agriculture example cited above is an instance of this sort.

Another reason is the legal structure which permits restriction on the rate of adoption of new techniques by the patent device. Lack of information on the existence of better techniques or lack of know-how in using them also inhibits the use of advanced practices. Secrecy, inadequate educational systems, and lack of incentive to the spreading of knowledge or to the seeking of better techniques all contribute to this situation.

---

[3] See my *Social Implications of Technological Change* (Social Science Research Council, 1950), Ch. 3, for a graphical analysis of this situation.

Social structure may inhibit the imitation of desirable innovations. In a class-divided society, with income distributed on the basis of caste or power rather than on the basis of productivity, there is little incentive to invent, innovate, or imitate better technicways. Jacques de Vaucanson's textile machinery inventions and innovations, for example, did not spread in eighteenth century France, which was characterized by such class and income division, while the inferior Arkwright inventions readily spread through British industry. De Vaucanson would not even have performed his work had he not been appointed inspector of the silk manufactures. Prior to this appointment, he had mechanical interests but devoted them to the perfection of automatons.

Lagging technology is sometimes the result of managerial and entrepreneurial decadence. Management and entrepreneurship may grow decadent because of the spirit of the whole society. The idea that old ways are better than new, that social status is a better qualification for managerial positions than ability or training, that no change should be undertaken which would force anyone to change his job, his occupation, or his way of life, can pervade the atmosphere and prevent even the occurrence of technological leadership.

Firms sheltered from competition by cartel arrangements, tariffs, or monopoly position are most often afflicted with managerial decay. Although it may be economic to use improved techniques, such management may fail to do so. While management or entrepreneurship does not necessarily grow decadent when firms are sheltered, such conditions permit the survival of those which do.

Management selection and training systems are an important element leading to decadence. Warren Scoville's study of the glass industry (*Revolution in Glassmaking*) hints that status systems result in entrepreneurial mediocrity which in turn results in technological fixity. He suggests that entrepreneurs recruited by ability rather than by birth and recruited from different industries provide the cross-fertilization conducive to rapid technological advance. English experience seems to confirm this. As the London *Economist* pointed out in a discussion of the causes of incompetent management:

> One reason for this state of affairs [incompetent management] lies in the extent to which British business management is still dominated by the amateur. It is only in this country that the curious profession of the "director of companies" still exists. There are thousands of men in this country who make a handsome living by sitting on a large number of boards and directing the affairs of companies to no one of which they can give more than a small fraction of their time and attention. Some of them, of course, are mere guinea pigs. Even the more reputable and hard-working, though they can offer their companies a great deal of sound general advice, based on a wide knowledge of men and affairs, remain the merest amateurs in relation to each one of them. That a sprinkling of such men would be an asset to any board is beyond doubt. But that so many boards

should consist entirely of such men cannot be other than a handicap to wise, energetic and far-sighted management. The description of company directors in the Liberal Yellow Book nearly twenty years ago is still all too true today:

> "A director, once appointed, though nominally requiring reelection every few years, considers himself entitled to the office for life, unless he chooses to retire. . . . Sometimes there may be a chairman or a group within the board strong enough to drop a useless director. But, generally speaking, a director would consider himself greatly aggrieved if he were dropped merely because he was elderly, useless, or without special qualifications for the work. It would even be considered bad form to propose such a thing. . . . A director on resigning frequently expects to be succeeded by his son."

Methods of recruitment may be used which are apparently based on ability and yet fail to produce men of ability to staff decision-making positions. If, for example, there is an industry tradition of putting all executive and engineering trainees in the "shop" with the provision that they compete on equal terms with others (as in the steel industry), potential innovating talent may be repelled, or, alternatively, may be thoroughly grounded in the prevailing techniques and current views on method with a consequent stifling of freshness and originality. Selection of management from a body of men trained "from the ground up" may stifle innovation and imitation.

Market organization affects the rate of imitation, not only through its impact on the quality of management, but also through its impact on the slope of the marginal revenue curve facing the individual firm. Where new equipment has an average total cost of operation in excess of the average variable cost of operating existing equipment, its only outlet, until old equipment ages further, will be for the purpose of expanding production. It will not be economic, as yet, for replacement purposes. More expansion will occur in markets where no firm can cause a drop in price by expanding. A more rapid and a larger adoption of cost-saving equipment will take place, then, where markets are more perfectly competitive. This also influences the rate of development of technological possibilities since there is a larger market for improved equipment under these circumstances.

The Existence of Standards of Best Practice. There may be a real desire on the part of craftsmen and engineers and on the part of those who use their services to use the best possible production practices, economically speaking, and produce the best possible product. Yet they may fail to do so for lack of proper standards as to what constitutes best practice. In the early part of this century, it was believed that straight-run gasoline was superior to cracked gasoline. As a consequence, every effort was made to increase the proportion of straight-run gasoline. Not until the octane standard was devised and gasolines rated by this measure was it discovered that cracked gasoline was superior as well as cheaper.

A standard may seem inferior when measured by some physical rule or on a variable cost basis, as engineers are prone to do, yet be superior in a total cost sense. The standardized Diesel-electric locomotive, for example, was thought unsuitable by many railroad engineers. The cost of custom-built equipment so far exceeds the cost of standardized equipment, however, that the saving in total cost leads to its use where no imitation would occur if custom-built equipment were the only type available.

Dangers lie in set standards as well as benefits. Where they are enacted into legal codes, their inflexibility stifles development, as has happened in the case of housing. Also, they may embody poor practice rather than good practice.

Tactics of Leaders. The rate of imitation depends not alone on the desire and incentives to imitate but also on the tactics of technological leaders. Those who keep their processes secret or who do little more than hold traditional market positions inhibit the spread of better practices. Those who take pride in showing their superior techniques, inviting observation, or who attempt to expand their market position cause superior new practices to spread more rapidly.

The attempt of technological leaders to expand their market position will cause other firms to react if they operate in markets where buyers are interested in getting a lower price or a better product or where selling effort makes a difference. The fact of technological leadership means a firm either has lower cost—which makes it possible to lower price, expand selling effort, or improve product—or a better product, which gives it the necessary weapons for improving its status. The use of these weapons creates an environment which will "adopt" imitators (or firms which in turn assume leadership) and cause laggards to disappear. In the absence of such a market environment and such tactics, laggards may survive alongside leaders and imitators. Imitation will be slow unless there is a conscious effort to maximize business profits within a given market position.

Where the leader of an industry is put into that position by a supplier of equipment or technical information, the tactics of the supplier are important in determining the rate of imitation. The supplier may make exclusive arrangements with the leader which inhibit imitation. If the supplier is owned by the leader, as in the case of the Western Electric-A. T. & T. affiliation, the effect is usually the same. If equipment is supplied by an independent firm, however, the supplier is usually anxious to make further sales and will employ trained engineers as technical salesmen who will educate potential buyers to the new technique. Under those conditions, the rate of spread of the technique will be fairly rapid.

The Level of Technological Leadership

If the level of technological leadership makes a difference in the level of the average technology of an economy—and we have indicated above that it may do so—it is important that we know something about the determinants of the level of leadership. It may be argued from such evidence as the simultaneous development and application of new principles and devices in widely separated places that leadership makes no difference. If, however, leadership does influence imitators, it may be worth while to prod leaders or even to subsidize them. If they have little effect on the average technology, it may be worth while to force a change in their tactics and in their environment to make them more effective.

Overinvestment in Old Equipment Inhibits Potential Leaders. Technological leadership may lag behind technological possibilities for economic reasons just as the economic level of actual technology lags behind the level of the leaders. If the equipment of all firms is relatively new with low maintenance costs, average variable cost of operation even in the firms with the oldest equipment may be lower than average total cost of operating with a new technique, particularly if the appearance of the new technique was unexpected or if the industry has suffered an unexpected decline. In that case, it would not be sound policy for any firm to change to the new technique at once.

If the new possibility was unexpected, existing equipment will be used to expand output rather than new.[4] Not until aging of equipment has increased average variable costs or further improvements have sufficiently lowered average total unit costs when using new equipment does it become economic to replace the old technique.

Growth, Decline, Sunk Capital, and Innovation. An invention which would be economic for introduction in a growing industry may not be in a declining industry. A declining industry will adopt a new technique only if average total cost is less than average variable cost of operating with old equipment. The more recent and rapid and the more unexpected the decline, the more likely it is that average variable cost will be low since a relatively large stock of unimpaired old-type equipment will be available. A growing industry will adopt a new technique if its average total cost is less than average total cost of producing with new equipment of the old type.

The telephone industry provides an example of technological change which is dependent on growth. Telephone companies do not replace manual switching with dial systems in areas which are not growing and in which switchboard equipment is of fairly modern vintage. Dialization occurs in the areas where demand has outgrown available facilities. Rather than build more manual central offices, mechanical switching is instituted. Dismantled equipment is then used for minor expansion in exchanges where there is still building space for more manual equipment.

---

[4] Lack of foresight will have resulted in overinvestment in old-type equipment. See my "Welfare Theory, Technological Change, and Public Utility Investment," Part II, *Land Economics*, May, 1951.

Unitary Character of Plants May Inhibit Innovation. In many cases, the use of a new formula requires major new equipment rather than alterations or minor replacements or additions to an old plant. This may be the case even where batteries of machines are used, if maintenance cannot be economically performed with a variety of machine designs. The difficulty of adding low-cost, Diesel driven ships to American fleets illustrates this. Differences in type of power used may also prevent additions of new types of equipment to batteries. Electric driven units cannot easily be added in a plant using steam power or power from a central source supplied by shafts, pulleys, and belts to individual pieces of apparatus. Narrow aisles and low roofs have similarly inhibited the introduction of new equipment items in textile mills and foundries.

The unitary character of plants is less of a barrier to innovation where an industry may be enlarged by the addition of a new and independent plant than it is where the whole industry is a unit. In the case of railroads, for example, it has been said that it is difficult to introduce changes because equipment must be interchangeable with other roads. In some instances where this has been argued, as in the case of the roller-bearing freight car and the damage-free car, the difficulty is one of getting industry-wide agreement to a high rental for superior cars rather than the barrier of the technologically unitary character of the industry. A new coupling would be more difficult to introduce than the new cars cited.

Leadership Tends to Pass from Firm to Firm and Nation to Nation. Since the replacement of equipment will occur when the average variable cost of the old, which usually rises with age, exceeds the average total cost of production with new type equipment, assuming the same quality of product, we would expect technological leadership to pass from one firm to another, as their plants successively age to the point where it is worth while to replace them, or to new firms or capacity providing for increased demand. An industry may have several leaders, each using the latest technique in a different department.

The role of technological leader in any given industry or set of industries may similarly pass from nation to nation if the major part of the expansion of these industries occurs at an earlier date in one nation than another. Great Britain's early technological leadership, for example, may have automatically resulted in the passing of technological leadership to Germany and to the United States. The sunk capital embodying earlier techniques may still have been economic after the development of improved techniques. Since German and U.S. industrial expansion came later, their equipment embodied "better" techniques than average English equipment. Once English equipment ages to the point where it becomes economic to replace it, average English technology should once again leap ahead.

Unfortunately, early technological leadership may inhibit later technical progress for reasons other than the volume of sunk capital occupying the places new techniques might otherwise fill. The fortunes acquired by industrial leaders by saving from profits and other income lead to an elevation of the tastes and living standards of the capital supplying classes. If they are elevated sufficiently, and they are likely to be in societies possessing an aristocratic class setting princely standards of consumption, the cost of maintaining these standards may lead to such demands for income for spending purposes that little accumulation is provided for replacement purposes. This is all the more likely to happen where inadequate accounting techniques are employed. As a consequence, a lack of capital may then prevent the replacement of old-style equipment at the time that it would have been economic under the circumstances of a more liberal supply of capital. Technological backwardness may then become permanent unless new sources of capital are found. (The situation should be characterized as one of capital deficiency rather than technological backwardness, since technology is adapted to the circumstances of scarce capital.)

Factors Contributing to Leadership Continuity. Since the apparently advanced techniques are capital intensive, a growing supply of capital will not only lead to early replacement of equipment but will also lead to continued movement toward more advanced methods. On the level of the firm, this means that a firm whose entrepreneur is willing to practice frugality and "plough back" earnings will remain a technological leader, assuming that scale problems in production or marketing do not interfere. Once such a firm has achieved success, it is likely to find capital available at minimum cost and be in a position to maintain its leadership simply because of its superiority in raising capital. This is particularly true under today's tax laws in the United States. The cost of raising much of the capital used by a successful corporation which retains earnings is zero in the sense that it is borrowing from the federal government at no cost by delaying the payment of personal income taxes. (There is an additional incentive for this action since capital gains are subject to a lower tax than other forms of income.) In this way, success puts a firm in a position of being able to remain a leader. Success even presses it to remain in the leadership position in order to use its zero cost capital. This, in part, accounts for the diversity of product of many firms which find that scale problems (and antitrust action) prevent the use of more capital in an original line. They turn, then, to the other lines and often become leaders in those as well.

Similarly, a nation may maintain leadership if abundant capital is available and its movement into advanced methods is not inhibited by deflationary pressures and inflexible costs (and selling prices) which make investment in money more productive than investment in capital goods. The spirit of competition and of the desire for improved ways are also important in inducing the flow of capital into "advancement." If gold bracelets, precious stones, mansions, old masters, and similar forms of wealth are preferred to securities or to improved plants, an abundance of capital will contribute only to the maintenance of industries producing consumers' durables.

Where the capital available to individual firms is abundant, their movement into new lines, as described above, tends to introduce a new dimension into competition which reacts on the competitive structure in such a way as to help a nation maintain a position of leadership. If a firm attempts to move into a product line by simply offering more of the same product, it will generally find a low rate of return resulting. The industries producing products that have long been standardized are notoriously poor earners. Only by improving a product or by introducing a new product can high rates of return be earned. Doing this, however, causes the demand facing industries producing standardized products to decline. Firms in these industries then find it necessary to improve their product or introduce a new product in order to survive. The result, then, is competition in the dimension of product design which results in technological advance in this area. As R. S. Sayer says (in "The Springs of Technical Progress in Britain, 1919-39," *Economic Journal,* June, 1950, pages 284-285): "Sometimes the stimulus to improvement came not from a new demand but from the threatened loss of market to an alternative supply." The outstanding example of this during our period is provided by the steam engine, where the competition of internal-combustion engines—particularly the Diesel engines—stimulated improvement. A multitude of minor changes, applying long-established principles, were responsible in the twenties for results which "would have been thought impossible a few years ago, and which would presumably never have been attained had it not been for the ever increasing competition of the internal-combustion engine." Significantly, the writer of these words went on to say: "These developments have spurred on the designer of oil engines to further effort. . . . It was the stimulus of competition that kept the three main types of marine engine—the diesel, the steam turbine and the reciprocating steam engine—in a neck-and-neck race through most of the period. Similarly in communications—the competition of radiotelegraphy awoke the cable companies to the importance of improvement, and stimulated experiments in 1920-24 which evolved the new type of cable laid from 1924 onwards."

In nations where markets are growing, technological leadership may be maintained through the addition of new firms using the latest methods and expansion of old firms. This contributes not only through maintaining a higher proportion of each industry in an up-to-date form but also through providing a market for equipment which makes it worth while for equipment firms to undertake developmental design work in an endeavor to capture a larger market. This would not be worth while if such a market did not exist.

Simple population growth as a method of enlarging markets does not contribute to technological leadership if it grows more rapidly than the supply of capital. Under such conditions, technological retrogression may occur, since the attempt to widen capital will cause shallowing of capital. The market for new techniques and equipment will languish with a consequent decay of development work and innovation, except where this can be directed into capital saving channels.

Factors Causing Uneconomic Levels of Leadership. Technological leadership may lag behind the economic level, from the social point of view, because of tax penalties incurred by early replacement, because of improperly set cost-selling price ratios (usually resulting from market distortions), because of the private risks involved in committing capital to specialized forms which exceed the socially unavoidable risks (the latter properly being a determinant of the economic level of technological leadership), or because of restrictions imposed by unions, cartels, or the law.

Technological leadership may run ahead of the economic level. U.S. airlines whose management consisted of "glamor boys" may have tended to develop and buy new equipment at uneconomically high rates. (This is now a cause of the lag of the U.S. in airline equipment. The overabundance of fairly new airliners inhibited the development and production of jet propelled airliners, since there has been little market for new models. As a result, leadership in airliner design and production and in airline operation has passed to Great Britain and Canada.) This may have been in part a consequence of the divorce of ownership and control in the modern corporation. Stockholders bore the losses resulting from such procedure, while management continued to draw salaries, although operating as if aviation were a hobby instead of a business. Also, the subsidy policy of the Civil Aeronautics Board which "bailed out" the airlines which suffered the pains of uneconomic policy preserved the technologically overaggressive concerns which otherwise would have had to change policies or suffer bankruptcy.

A divorce between ownership and control has led to uneconomic leadership, not only in some corporations, but also in government enterprises. Since losses in these enterprises are sustained by taxpayers while those who make the decisions often gain by enlarging their sphere of activity, although such enlargement may be uneconomic, premature use of improved techniques is often undertaken and even premature research and developmental activity. The shale oil extraction and synthetic fuel research carried on by the Bureau of Mines is an example of premature investment of capital in developmental activity by a governmental agency. This should be compared with the development of taconite iron ore processing by private enterprise. Development has been slowed to a pace such that, "when the direct-shipping ore from Minnesota runs low, the steel companies will have the low-grade taconite all ready to help fill the gap."[5]

The Influence of Invention on Innovation. Among the factors influencing the rate of innovation, invention is one of the more important. Most innovations are applications of preceding inventions. Even in the Schumpeterian and Usherian sense, innovation would be severely restricted if inventing were to cease.

Noneconomic innovations often occur as a result of invention. Where concerns are interested in maintaining a position at the technological frontier—as the Budd Company once was and as airlines have been—they often prematurely apply new techniques. The naïve tendency to assume that any new invention is better than prevailing practice leads to the same result where interested persons are not checked by the necessity of earning their way. The development of synthetic fuel know-how has resulted in government subsidization of "commercial" production of synthetic fuels. This same factor is spurring the "commercial" application of atomic energy.

In the absence of noneconomic motivation and financing or of mistaken judgment, inventions lead to innovation only if they are economic in the circumstances of the prevailing resource, taste, division of income, and technique pattern. Although an invention may be economic for some resource patterns, it will not be applied unless it fits the pattern of relative scarcities in the world in which it finds itself.

Research and Technological Possibilities

The development of technological possibilities may lag behind (or move ahead of) the economic level of development just as leadership and diffusion may not move at the economic rate. To consider the gap between the actual rate of development and the economic rate of development of technological possibilities, we must have some idea of what is meant by an economic rate.

The Economic Rate of Development. What is considered as an economic rate depends upon what ends we choose as given in our measurement of the efficiency of this means in attaining those ends. We will assume that development of technological possibilities is for individualistic, utilitarian purposes. That is, it is for the purpose of giving people more of whatever-it-is-they-want as long as it does not necessarily involve reducing the amount of desires satisfied for other individuals. We include in desires not only those things which can be satisfied by economic goods, such as the desire for a beautiful home or a clean body, but also desires which may be fulfilled only by noneconomic procedures, such as the desire for freedom from direct controls or the desire for existence in a family.

---

[5] "Taconite Will Be Ready When—," *Business Week,* November 11, 1950, p. 76.

On this basis, we may state initially that the rate of development is too great if it produces knowledge which is not used (or that it is at least misdirected if the knowledge is premature and must wait to be used until other knowledge is developed). However, if a reorganization of research to eliminate the currently noneconomic inventions would produce no significant reduction in total research costs, the charge of misdirection is not applicable.

If slowing the development rate makes no difference in the level of technological leadership or the level of technology of the economy, then it should be slowed, unless knowledge (or the by-product of training produced in the course of research) is an end in itself and the gain in knowledge is sufficient to recompense those who have borne the expense of the research. If research does affect the level of technology practiced in the economy, and this is its only purpose, then the value of an increment of research and developmental work depends upon the value of its consequences in application.

It should be emphasized that, *ex ante*, it may be difficult to appraise research in terms of the pragmatic tests outlined above. Undervaluation of some types of research activities may be characteristic of a naïve use of these criteria. Because of these *ex ante* difficulties, we must preserve the "wildcat" inventor who often is as prolific in fields ruled out by conventional science as the wildcat driller is in fields ruled out by conventional geology. Edison with his electric lamp is but one of a host of examples.

If innovations increase the rate of saving and of capital formation, then the utility of the increment of knowledge leading to an innovation depends, in part, upon the value of the additional capital to the society less the cost of the capital. If the alternative to capital formation is frustrating idleness for the resources involved, there is no cost. If the cost of the capital is the sacrifice of consumption, the cost may be impossible to compute by methods and on ethical bases now known, unless the saving is completely voluntary. If the cost is sacrifice of alternative capital items with no effect on the rate of saving, forced or voluntary, then the cost is easy to find.

Departures of the Actual from the Economic Rate of Development. The optimum rate of investment in research and development is that at which another increment of investment in such activity will yield benefits smaller than the cost of the investment. Since social benefits usually exceed private benefit from such activity, private investment in research motivated by profit falls short of the socially optimum rate. The fact that private benefits are less than social benefits, if such is the fact, may be sufficient to cause the actual rate of development of technological possibilities to fall short of the socially optimum rate.

There are many other reasons for differences between the optimum rate of development and the actual rate of development. Unnecessary hindrances to the application of developments which cause private cost to exceed social cost in such application reflect themselves in the slowing of private investment in research. Market organization affects the profitability of research through its effect on the rate of application.

To the extent that individuals and organizations allocate funds to research activities for reasons other than commercial profit, the gap between actual and optimum rates may be closed or more than closed. Even profit-seeking corporations are said to maintain research programs for prestige reasons. Others are said to maintain research not profitable to stockholders in order to maintain the corporation in question as an entity.

Lack of co-ordination between profit-motivated and nonprofit-motivated research may result in less productivity in terms of knowledge or utilitarian techniques than might otherwise be achieved. On the other hand, to the extent that the allocation is determined by research workers who find nonpecuniary satisfactions in pursuing their interest rather than those who make the appropriations, the return may far exceed that attainable from the same funds allocated in a rationally organized program which takes no account of such nonpecuniary motivation.

The rate of advance in technological possibilities, given the amount of research appropriations, depends upon the productivity of those appropriations. Institutional allocation is important in determining the productivity. If all funds are spent only in university or only in industrial laboratories, the rate of advance is likely to be slower than with a proper allocation between them. It would seem that fundamental industrial developments, as contrasted with developments that represent small departures from or improvements in previous practice, often rest on a foundation of fundamental data and theory of a type contributed by "fundamental" research usually carried on only by nonprofit organizations or individuals disinterestedly seeking to advance the frontiers of knowledge. Such contributions make not only for radical departures in industrial practice but also make for less trial and error in the devising of small improvements in ordinary practice.

The total amount of funds allocated to research depends upon many factors. The flow to nonprofit organizations depends upon the interest of those who donate such funds, where individuals are donors, or upon the political power of groups who may have interest in certain fields of knowledge simply for the sake of knowledge or who may be beneficiaries of any advances, as in the case of farm groups and agricultural research. The quantity of funds provided by profit-motivated persons depends upon the amount of the social benefit which they can appropriate for themselves. This, in turn, depends upon their monopoly position in an industry, the presence of a patent system, or upon the existence of prizes. Unfortunately, such devices as monopoly or patents, which appropriate more of the social benefit for the persons who must be motivated to make research expenditures, simultaneously reduce the social benefit. Methods should be devised for increasing private benefits at the margin to equality with the social benefit without reducing the total social benefit.

Economic Directions for Research. In discussing the determinants of the economic rate of development of technological possibilities, we have taken little explicit account of the relationship of the type of economic organization, the resource pattern, and the directions of change in these, as related to the type or direction of development. If development can move as efficiently in certain directions as in others, then a higher rate of development may be economic, provided it is properly channeled, than if efficient movement in those paths were impossible, despite the existence of easy alternative directions. For example, in an economy suffering from the consequences of past deflations and rigid cost prices, capital-using development of a kind that will lead to increased bank lending (assuming a partial reserve banking system with excess reserves) or to absorption of idle funds (assuming there are any) is preferable to developments which do not have such results. On the other hand, an economy suffering from inflation will benefit from the opposite type of development if velocity of circulation of money has not already shot to levels sustainable only on the basis of continued inflation.

An economy whose resource pattern is shifting in the direction of declining quantities of capital because of high propensities to consume should devote a portion of its depreciation-freed-capital not currently consumed to capital-saving development, assuming tax structures and publicly controlled welfare provisions enforced on the entire social body are not to be changed. The situation in England today seems to be one in which capital is not forthcoming in desired quantities because of the increased propensity to consume induced by government measures which result in directed consumption (medical care, for example) and which rechannel income into the hands of those with a high propensity to consume. The measures have also inhibited saving by penalizing property income and by providing greater security through state action which makes private action less necessary.

Direction of Research and the Backward Area Problem. Point Four has captured the imagination of many American opinion makers as a device designed to serve the current ends of public policy as well as one which fits American ideals of generosity to those less favored. They seem to feel that underdeveloped areas need only our knowledge—our know-how—to move per capita income to much higher levels. A technology developed for an oil-coal-iron-water-power-broadleaf-forest complex of resources, however, is not easily transferable to tropical-rain-forest or semiarid regions in which the primary source of power is wind and sun. Technological possibilities for such areas may be very low. H. G. Aubrey points out, for example ("Deliberate Industrialization," *Social Research,* 1949, page 164), that "it was fortunate for Mexico's early industrial effort that water power was plentiful, for the steam engine, which had been a major stimulus in promoting the industrialization of Europe, was absent in Mexico. The only available fuel, and that in decreasing quantity, was wood and charcoal; the coal deposits of the north were still mostly unknown at that time and, in any case, were too far removed from the centers of industry to be usable." The proper approach may be one of raising technological possibilities for the area rather than attacking at the other levels of technology by the export of technical know-how.

Directing investment into raising technological possibilities for backward regions may be uneconomic if this were the only purpose. If new techniques suitable for their resource patterns can be produced as a joint product, however, or if the research program were to concentrate on producing techniques useful in developed areas as well as in undeveloped areas, the investment might then become economic.

A useful direction, it would seem, would be an attack on the indivisibilities which inhibit economic development. A railroad, for example, might be the only form of transport that would be feasible in the present state of technology for an area. Since economical bulk transport is usually a necessary preliminary to development, the huge cost of roadbed and rails might make development uneconomic. A research and development program, however, such as those which produced the buses and trucks now used for desert runs in the Near East and the "swamp buggies" for Louisiana, together with the necessary new-type equipment, might be less costly than building a railroad and might make progress economically feasible.

Similarly, the development of small-scale refining methods for vegetable oils, small-scale equipment for timber operations, tools for agricultural work suitable for the types of cultivation feasible in the underdeveloped regions, etc., might constitute a more productive use of Point Four and other aid funds than direct investment based on the present technological possibilities. The training of natives in the techniques appropriate to other resource patterns might actually delay progress under the circumstances assumed here.

Conclusion

Optimum and actual rates of invention, optimum and actual rates of innovation, and optimum and actual rates of imitation probably differ considerably. This in part is the result of differences in social and private benefits at these various levels of activity. This in turn is a consequence of the property (and tax) complex and the market complex.

Innovation and imitation are more rapid in competitive markets, insofar as little investment in skill development that may be lost by worker turnover is required, but invention, in the absence of a patent system, is less rapid than in noncompetitive markets. There may be an optimum degree of noncompetitiveness, since there are two forces working in opposite directions which vary with the degree of competitiveness. The greater the degree of monopoly, the larger the private benefit to the inventor and therefore the greater the incentive to the monopolist to undertake developmental work. The smaller the number of firms in a market, however, the smaller the number of sources from which progress may come and, therefore, the slower the rate of progress. The Servel Company, for example, is happy to see the Rheem Company moving into the gas refrigerator field because it feels that many of the technical problems will be solved more rapidly. It believes its market will expand because the solution of problems in the industry will expand the total market by more than enough to make room for Rheem. (See "When Everybody Loves a Competitor," *Business Week,* November 25, 1950, page 68.) In imperfectly competitive markets development work tends to be focused on product improvement, and product innovation tends to occur at a higher rate than in competitive and monopolized markets where cost-saving inventions and innovations receive more attention.

The amount and character of the capital supply plays a significant role in shaping the rate and direction of technological change. Large supplies of capital increase the rate of change. Where capital suppliers are security-minded—and the modern structure of capital supplying institutions seems inclined in this direction—the rate of imitation tends to speed up at the expense of the rate of innovation (except of that of markedly cost-saving character) and the rate of invention. On the other hand, although security-minded owners of capital are not inclined to back speculative developmental ventures, security-minded managers of corporations insure the life of their organizations, perhaps to the detriment of the stockholders in some cases, by backing research programs.

In attacking the problem of furthering economic development, particularly in underdeveloped areas, a decision must be made as to whether effort should be lavished upon the diminution of the gap between technological possibilities and the level to which it is economic to develop them, upon the diminution of the gap between the level of the technological leaders and that of the technological possibilities, or upon the diminution of the gap between the average technology of the area and that of the leaders. Here, the considerations previously described must rule. A determination must be made of whether a gap of more than an economic amount exists between leadership and the possibilities and between the average technology and that of the leaders. The efficacy of an additional unit of effort in diminishing one or the other gap must be measured and the effort then put where it can accomplish most.

RELIGION AND ECONOMIC BACKWARD AREAS

By S. D. Clark
University of Toronto

It is somewhat presumptuous on my part to appear before you today with this paper on something about which I know so little. An effort to throw light on the nature of religious developments in Canada has led to a concern with the problem of the way in which religious developments have been related to economic—and political—developments. With other matters occupying my attention, however, no investigation of this problem as such has been undertaken. This is not a report on findings. What is said here is frankly speculative and intentionally provocative.

It is to the pioneer work of Max Weber that one must turn for the fullest examination of the relationship of religion to economic development. Weber was concerned with the problem of explaining how capitalism grew up in the Western World and failed to grow up in other areas where material conditions, natural resources, availability of a labor supply, and such were equally favorable. He finds the explanation at least in part in the nature of Protestant religious teachings. The spirit of capitalism developed out of that peculiar religious attitude of mind which he describes as the Protestant ethic, and out of the spirit of capitalism, in turn, there grew that rational organization of business enterprise in terms of profit known as capitalism.

In general terms, the facts would appear to support Weber's thesis. Protestant areas of the Western World have developed as predominantly capitalist areas; non-Protestant areas have tended to grow much more slowly economically and many of them have not yet advanced beyond a precapitalist stage of development.

Yet there are certain awkward facts which need to be explained. Some of the most economically backward areas of the Western World are Protestant areas. More than that, they are the areas where Protestantism has developed in its most extreme forms. The so-called "hillbilly" societies in the United States and similar societies in Canada, for instance, are in many cases intensely Protestant in character; it is here that is most kept alive the true spirit of the Protestant Reformation. In the population generally, those people who are the least economically enterprising tend to be the most Protestant in outlook. Indeed, one can almost go so far as to say that it has been among such people that Protestantism has made its largest inroads on the Roman Catholic Church.

Weber would appear to identify too closely the spirit of Protestantism and the ethic of Calvinism. The ethic of Calvinism was favorable to capitalist growth, but this ethic developed more in reaction to than as an outgrowth of the Protestant spirit. Protestantism represented a revolt against the authority of the Church—a demand for the return to the simple forms of organization and doctrines of primitive Christianity. The highly authoritarian Calvinist Church, with its carefully worked out body of theological principles and doctrines, can hardly be thought of as giving expression to this urge within Protestantism towards religious freedom and simplicity. Rather, the development of the Calvinist Church—and of the Lutheran Church to a lesser degree—represented an effort, through the building up of a highly disciplined type of religious life, to impose a check upon the more extreme forms of expression of the spirit of Protestantism. Where the heavy hand of a Calvin was absent, Protestantism was less favorable to economic enterprise than had been Roman Catholicism.

Within the system of ecclesiastical control developed by Roman Catholicism, the economic—and political—organization of society was made as far as possible to serve the ends of religion, but the Church was not entirely hostile to economic enterprise. A healthy economic life was essential to a healthy church life. Thus an effort was made by the Church to maintain a balance between man's spiritual and his worldly interests. Ecclesiastical control of such a kind did not make for marked economic progress—there was too little economic freedom permitted—but it did make for economic well-being.

Protestantism, growing up as a protest against the rule of a church which was thought to have become too accommodative to worldly interests, had the effect of weakening the organization of religion and thus of destroying the means of maintaining a balance in society between spiritual and worldly interests. With the breakdown of church discipline, religious feelings were given much freer expression and whole communities were caught up in the frenzy of religious revival. Among the followers of the more extreme movements of Protestantism, such as the Anabaptist movements in central Europe, salvation of the soul became the dominating passion of life and in the concentration upon this objective all worldly obligations and duties were neglected.

It is not in any way surprising, therefore, that it should be those people least economically successful in their society who were most attracted by these movements. Religion offered a means of compensating for economic failure. The person of religious faith had little need of worldly goods. Indeed, the possession of worldly goods was an obstacle to leading the life of a truly holy man.

In America the close association of Protestant religious revivals with the frontier has tended to obscure the nature of their effect upon economic development. The frontier characteristically has been thought of as an area of economic and cultural progress. Actually, as the English historian Arnold Toynbee has pointed out, its development represented a step back in civilization. It was poorer—materially and culturally—than the old-world societies out of which it had grown. Religious revivalism was an expression of this economic and cultural poverty of the frontier.

How then are we to explain the relationship of Protestantism to the rise of capitalism? How could a movement which developed as an expression of economic failure be in any way related to economic progress?

The answer in part is to be found in the fact that economic failure was a condition of economic progress. The development of new forms of economic enterprise resulted from the breakdown of established economic relationships, with attendant widespread feelings of economic insecurity, and there was nothing remarkable, therefore, in the fact that periods of economic change were characterized by the rise of religious protest movements. For the most part, it was not the people who gained most but the people who gained least from economic change who were caught up in these movements. Thus on the American frontier the evidence would support the view that it was those people, by and large, who were unable to meet the obstacles of frontier life and who fell by the wayside who were the most fanatically religious. The revival and camp meetings of the frontier attracted few of the more well-to-do farmers who had gained markets for their produce and who were faced with an increasingly pressing problem of a labor shortage. Nor were such meetings often attended by members of the rising bourgeois class in the towns.

Where the frontier continued too long a frontier—that is, an area lacking outside markets and cultural contacts with the outside world—it used up, so to speak, what economic and cultural capital its original population had brought in and degenerated into a slum. Throughout the North American Continent can be found such areas where long isolation has bred in the population an attitude of indifference towards economic and cultural betterment. Here those forms of religious organization which grew up on the frontier have persisted with little change.

In those areas, however, where frontier conditions passed and where conditions of material and cultural poverty gave way to conditions of material and cultural well-being, the forms of religious organization changed markedly in character. The sectarian, become prosperous and socially respectable, transformed the sect into the church.

Yet it must not be assumed from this that religious developments were simply determined by economic developments. If conditions of economic adversity found expression in the development of movements of religious revival, the development of these movements in turn tended to the persistence of such conditions in society. On the other side, the change within these movements to more accommodative forms of religious organization must be thought of as a factor in as well as a consequence of the development of conditions of material prosperity. To some extent, it was not the sect which was transformed by the sectarian become prosperous but the sectarian who was transformed by the sect become anxious to strengthen its position in the organization of the community.

In other words, as Weber argued, participation in religious sectarian activity may well have been a factor in the achievement of economic success though the relationship was not as direct as Weber supposed. The significance of the Protestant religious revival lay in its effect in destroying the traditional balance in society between spiritual and worldly interests. Immediately, the result was a strengthening of the religious interest but at the price of weakening the means of keeping that interest alive. In destroying the organization of religion, the Protestant revival threatened in the end to destroy the religious interest itself. Thus the development within many Protestant sects of strict disciplinary controls in matters of doctrine and practice represented an effort to check the too extreme manifestation of religious feelings growing out of revivalism. Through such controls a balance was restored in society between spiritual and worldly interests but it was a balance often more favorable to worldly interests than had been the traditional balance it replaced. It was because out of Protestantism there developed such forms of control in religious organization that it contributed so greatly to economic growth.

In the first place, the Protestant sects provided a cheap form of religion and thus made possible the release of labor and capital for economic development. This was not a direct consequence of the Protestant religious revival. Revivalist movements, as for instance on the American frontier, typically grew up among people who could not afford the heavy financial burden of supporting an elaborate ecclesiastical establishment with its churches and cathedrals, seminaries, hospitals and charities, and a professional priesthood or ministry, but people, on the other hand, whose time was of little value. Thus if these movements offered a cheap religion, it was a religion which made extravagant demands upon people's time. In periods of frenzied religious excitement, whole communities became caught up in a continuous round of religious activities. It was to meet this problem that there developed within Protestant sectarian teachings the notion, however doctrinally stated, that work was a virtue and slothfulness a sin. The result was a religion which imposed no heavy financial burden upon the community and which at the same time made of work the most important religious duty of man.

In the second place, as Weber recognized, the disciplined form of religious life developed by Protestantism—the Protestant ethic—was highly important to economic growth though it grew only indirectly out of the Protestant spirit. The Protestant sects had to concern themselves much more than older established forms of religious organization with the disciplining of their members because the problem which they faced was much greater. Thus the strictness with which they enforced conformity to the doctrines they taught and the rules of living they prescribed was a reflection of the almost complete disintegration of doctrinal truths and moral values in the heat of religious revival. It is questionable whether religion as such offers any support to a group morality; such support emerges out of the problem of church government and assumes particular importance in the religious teachings of the sect where the problem is of such an urgent character. The strict tabus of the religious sect, the ruthless exercise of the power of excommunication when rules of correct living were transgressed, stood in sharp contrast to the moral freedom which grew out of religious revival. Once developed as a means of securing orderly church government, the disciplined form of life of the religious sectarian became an important condition of economic success.

In the third place, the development of sectarian forms of religious organization served to weaken the traditional social class structure of society and thus to release social energies for the promotion of new forms of economic enterprise. Immediately, the effect of the Protestant religious revival was to substitute spiritual values of worth for values of worth which had been formulated within a traditional class system. The new spiritual elect took the place of the social elect. So long as the elect was defined in such purely religious terms, there was lacking any support of activities directed towards the achievement of worldly success. Rather, worldly failure became something of a measure of spiritual worth. Thus the emphasis in later Protestant teachings upon the close relationship between godliness and economic success represented a deliberate effort in the formulation of church doctrine to offset the effects of religious revival. To some extent, of course, this evolution in Protestant thinking was simply a reflection of underlying changes in the class structure of the Western World. To some extent as well, however, it lent support to these changes and helped prepare the way as a result for the growth of new forms of economic enterprise.

Closely related to the effect of Protestantism in weakening the traditional class structure of society was its effect in weakening the bureaucratic controls of the state. The Protestant spirit as such gave birth to no philosophy of political liberalism. Rather it led simply to an attitude of indifference to problems of political organization. In the enthusiasm of religious revival, the convert turned his back upon all obligations he owed as a citizen; he prided himself in his lack of interest in or knowledge of the world in which he lived. Through the development of such an isolationist spirit, the fostering of a general state of political illiteracy, religion lost any support it had in the collective organization of the community. It was the rebuilding of such collective supports of religion which was one of the main problems of sectarian church government. Under circumstances of religious division, where it was the older established forms of religious organization which enjoyed state support, the sect turned naturally to local bases of support. It no less than the church sought to build up a theocratic social order but it was one within rather than of the state. What this meant was the development of an intense spirit of localism rather than a spirit of state centralization. It was out of such a development there came that releasing of local energies so important to economic growth.

In the fifth place, the close group cohesion which developed out of the sectarian form of religious organization was in itself an important factor promoting economic growth. The Protestant religious revival, directed as it was against all forms of church control, led to an almost complete dissolution of group religious life. The religious convert owed attachment only to his savior, and group associations which grew out of the revival as a result were of a highly transitory character. It was to meet this problem of chaotic group relationships that there developed in the sectarian form of religious organization an extremely closed type of group control. No large ecclesiastical organization would have dared exercise the power of excommunication with the ruthlessness with which it was exercised by many religious sects! The result was the emergence in the community of small, closely knit groups of people who were ready to come to one another's assistance in the financing of new business enterprises, buying and selling, and in providing labor or employment. It is no accident that many joint-stock enterprises grew almost directly out of religious sectarian groups.

Finally, and this has been implied by much that already has been said, there resulted from the sectarian organization of religion a more rational approach to problems of life, including problems of an economic character. It is here that we must look for the explanation of that curious figure in capitalist history—the hardheaded businessman who at the same time is intensely religious. Such a person certainly was not produced out of the emotional heat of religious revival. The religious revival represented, rather, an almost complete flight from reason—a shift to a dependence upon revelation for the solution of all problems. It was to arrest such tendencies, in the interest of the orderly progress of religion, that there developed in religious sectarian teachings the notion of a sharp separation between the secular and religious duties of man. Thus, while Catholicism sought to isolate within monastic orders the more intensely religious of its followers, Protestantism, through the building up of rigid self-disciplinary controls, secured the isolation within the individual of his religious self. In this way, the Protestant could be thoroughly rational with respect to the everyday concerns of life without any feeling of conflict between his rational attitude and his attitude as a religious man. Not only economic growth but developments in politics, science, education and health owed much to the rationalist movement which grew in this indirect fashion out of Protestantism.

In various other ways as well, the development of Protestant forms of religious organization was related to the development of new forms of economic enterprise, but enough has been said here to suggest the importance of the relationship. For a paper concerned with the problem of economically backward areas, it may seem there has been an undue attention given to economic growth. To discover the factors of economic stagnation, however, it would appear necessary to examine some of the factors of economic progress. Implicit throughout this paper has been the view—bias, you may prefer to call it—that religion in itself operates to retard the economic development of society. If given full expression, the religious interest would in fact make economic life impossible. But in so doing it would destroy the means of maintaining itself. Some sort of compromise thus develops through the organization of religion, and the nature of that compromise is highly important in determining the relationship of religion to economic development. It has not been possible in this paper to do more than examine the kind of compromise which was forced upon Protestantism, and even here no consideration has been given to those widely divergent types of development evident, for instance, on the one side, in the emergence of such highly isolated local community sects as the Mennonites, or, on the other side, in the growth of such community-wide nonconformist churches as the Methodists. Nor has attention been given to the change in the relationship of Protestantism to economic development with its taking on of something of the character of a state religion as, for instance, in the growth of such ecclesiastical establishments as the United Church of Canada. If some of these developments proved less favorable to economic growth, the fact only serves to emphasize that there was nothing inherent in Protestant religious teachings which accounted for the close relationship of Protestantism to the rise of capitalism. Weber quite rightly stresses the important role played by such church leaders as John Calvin in preparing the way for the development of capitalist forms of economic enterprise. But if Protestantism had its St. Peters in people like Calvin, it also had its St. Pauls. One need only in conclusion suggest the fruitfulness of a comparison of Presbyterianism with Methodism with respect to their relationship to such developments in Western society as capitalism, liberalism, and science.

THE ROLE OF THE STATE IN ECONOMIC DEVELOPMENT

By HENRY G. AUBREY[1]
Institute of World Affairs

The extent and the degree of state intervention in economic affairs is, in the last analysis, a political, not an economic, decision. Before the advent of economic liberalism the primacy of the state in economic matters was taken for granted; lately, a similar tendency appears to be reasserting itself, resented by some, accepted by others. Underdeveloped countries, in particular, rely very heavily on the assistance and guidance of the state in economic development. It seems appropriate for the economist to investigate what role the state has played in that respect in the past in various parts of the world, and then to find out why government is presently called upon to perform a number of duties previously left to private initiative. I shall address myself to that task in this paper with the brevity which the limits of time unhappily impose upon all speakers.

I

England's industrial revolution did not cross the Channel or the Atlantic Ocean without the beckoning of foreign governments. In the beginning Britain tried to keep the new technology for herself; the export of machines and of technical drawings was prohibited. At the same time, other countries had to increase their domestic output as wars disrupted their established trade channels. The Continental blockade of the Napoleonic era in Europe was a powerful stimulus for the adoption of the new English inventions; so was the struggle for independence and, later, the self-imposed embargo in the United States. But the individual entrepreneur was frequently unable to get the machines and the skilled technicians to teach his workers; the risk and cost involved in procuring either were great. Few individuals succeeded, and when they did, they were anxious to keep for themselves the fruits of their initiative. Most governments, however, were reluctant to see their industries decline under the impact of increased foreign productivity and to risk subsequent domestic shortages. Thus, they took deliberate action to foster the formation of national industries by establishing a machinery industry, promoting mechanical production, and encouraging the widest possible distribution of the new technology. As I have shown elsewhere,[2] this happened in Switzerland and France, including the territories occupied by Napoleon; the tradition continued after Napoleon's time in Holland and, later, in Belgium. Flat grants or subsidies, loans or outright government financing, guarantees, patents, and premiums were among the instruments used, in addition to import controls, protective tariffs, tax exemptions, and other inducements. A number of similar instances could be cited from other European countries, such as Germany, Austria, and Hungary.[3] The United States, too, went through a similar period of active governmental sponsorship of industry before, during, and after the conflicts with England; subsidies, guaranteed markets, loans, quotas, and duties were widely used.[4]

---

[1] This paper originates in a research project on "Financing World Economic Development," now in progress at the Institute of World Affairs of the New School for Social Research under a grant by the Merrill Foundation for the Advancement of Financial Knowledge. The author acknowledges gratefully the comments and criticism received from Felicia J. Deyrup, Eduard Heimann, and Adolph Lowe.

Stringencies and shortages resulting from wars fostered the development of industries in the countries referred to, but these were clearly not the only stimuli. In the past, the ambition to catch up with industrial nations was, and it still is, an equally powerful motive. Mexico in the first quarter of the nineteenth century and Japan in the last are interesting examples. In Mexico, as I have shown at some length elsewhere,[5] a government agency similar to modern development banks in certain countries was established. It advanced funds, imported machines, and provided technical assistance for the establishment of certain industries. The agency failed financially, but the "pump had been primed." Incidentally, the creation of industry was already then, as it is now, justified by the need for raising the standard of living.

[2] "Deliberate Industrialization" in *Social Research*, June, 1949, pp. 175 ff.

[3] Only a few, little known sources will be mentioned here. Grants, subsidies, and loans were offered as inducements to speed the construction of textile machinery in Saxony during and after the Napoleonic Wars. See Heinz Torkewitz, *Der deutsche Textilmaschinenbau* (Munich, 1934), Dissertation, pp. 25 f., 34.

In the same period the government of Silesia used similar means for the modernization of the linen industry and the promotion of cotton spinning. See Curt Frahne, *Die Textilindustrie im Wirtschaftsleben Schlesiens* (Tübingen, 1905), pp. 112, 120, 153. Prussia had the first steam engine built in 1785 and spent considerable sums afterwards for subsidies, the import of machines, and training trips by foreign and domestic experts. See Conrad Matchoss, *Preussens Gewerbeförderung und ihre grossen Männer* (Berlin, 1921), pp. 15, 31, 46 ff. Early in the nineteenth century Austria wanted to beat England to the first linen spinning machine and attracted French experts with the promise of large premiums for the first 100 sets of machines built. They never worked very well and England won the race after all. See Johann Slokar, *Geschichte der österreichischen Industrie und ihrer Förderung unter Kaiser Franz I* (Wien, 1914), p. 367. Hungary used loans, subsidies, and grants to build up her textile industries in competition with her senior partner in the Austro-Hungarian Union. Between 1899 and 1909 about 13 million kronen were spent in subsidies for new factories and the expansion of old ones. See Wilhelm Offergeld, "Grundlagen und Ursachen der industriellen Entwicklung Ungarns," in *Probleme der Weltwirtschaft* (Jena: Universität Kiel, 1914), pp. 37 ff., 240 ff.

[4] "Deliberate Industrialization" (cited above), pp. 179 ff.

[5] *Ibid.*, pp. 159-174.

In Japan[6] the sudden transition from a feudal era of isolation generated a very large measure of state assistance to overcome the almost complete lack of knowledge, skills, and entrepreneurial capital. Thus the state started a number of key industries and operated them until private initiative could take over. Japan developed very rapidly thereafter and, characteristically, there was always a close co-operation between industry and the government which doubtless affected the policy of both.

The comparison of historic situations in different countries is a difficult undertaking, but I believe that a relationship between state and industrialization in the nineteenth century emerges sufficiently clearly to be recorded: entrepreneurial initiative, capital, and technical know-how were needed at the very time when the risks were great. Undoubtedly, a degree of industrialization would have taken place in some countries without any governmental assistance; in many instances, there was a fair measure of private initiative all along. The key for the understanding of the role of the state in these times lies, I believe, in two specific determinants of policy: the time factor and the diffusion of the new technology.

Time was of the essence, partly to cope with existing or threatened shortages, partly to "catch up and keep up" in competitive trade. It was, therefore, important that a few fortunate or shrewd individuals who managed to smuggle information out of England should not hold a monopoly. Thus, in many instances, the government set up foreign technicians in the business of making the new machines and paid them premiums or subsidies for each machine they sold. By such means a fairly wide distribution was achieved in a relatively short time. In other cases, the government needed only to make a gift of prototypes of new machines. In this manner the state assumed risks and cost beyond the capacity of many entrepreneurs. It made, thus, an important contribution toward the private investment decision. Frequently, however, it was necessary to supplement this function with loans or grants of money and other facilities if sufficient venture capital was not available. Finally, as the case of Japan shows, the state had to own and operate the plants when even the nucleus of a capitalistic structure was absent.

To sum up, the available historical facts[7] seem to indicate that the industrial revolution spread from England to other countries only with considerable assistance from governments. The degree and the extent of such assistance differed according to the required speed of progress, the specific obstacles to development, and the need to supplement private initiative. In most instances, however, private enterprise was able to take over after gestation periods of varying lengths.

---

[6] *Ibid.*, pp. 174 f.

[7] For further details, see *ibid.*, *passim.*

II

If we shift our attention to the twentieth century, we notice again a rapidly increasing tendency toward deliberate and accelerated development. Just as in earlier historical periods, war-born shortages gave a powerful impetus to domestic production in many countries. The depression of the thirties caused a virtual collapse of demand for most primary commodities. The underdeveloped countries realized painfully the extent of their dependence upon a limited number of products. Worse yet, they had to export greater quantities to pay for the goods they needed from abroad. Industrialization promised diversification and greater productivity. Moreover, the historical example of the developed countries showed the way.

The desire to "catch up and keep up" is reinforced by three elements: one political, one social, one demographic. Political independence, once achieved, seems not enough; to be economically dependent upon powerful industrial nations is resented as deeply as political "colonialism." Economic nationalism is more than just a defense against depressions; it is a driving force in the formulation of economic policy.

In the nineteenth century the social cost of economic development in long hours and starvation wages was no concern of governments. Today the state can no longer limit itself to creating a favorable economic climate. The social philosophy of the welfare state radiates from the industrial countries; at the same time, some of the most advanced social legislation is found in countries which have barely passed the threshold of industrialization.

A demographic problem arises from these social welfare efforts. The population of all but the most industrialized nations is growing rapidly at a rate which may not yet have reached its highest level. The pressure of population threatens to nullify the slow increase of national incomes which the development of the world's resources brings about. The death rate begins to fall while the birth rate remains very high in underdeveloped countries; the propagation of birth control methods conflicts with many religious and social traditions. Only accelerated industrialization and urban living seem to promise a gradual reduction of population increase, as the history of all industrial nations shows. Nor is this entirely a Western pattern of development: Japan, too, repeated the European experience.[8] Thus, rapid industrialization appears the best way to close the "scissors" of resources and numbers. Even so, this process is very slow and the population of already densely populated countries may double before the rate of increase slows to that of the more developed countries. The population of Japan increased from 35 million at the start of her industrial revolution to 73 million in 1940 in Japan proper, not considering about 3 million who went to live outside the home islands.[9]

---

[8] Irene B. Taeuber, "Population Increase and Manpower Utilization in Imperial Japan," in *Modernization Programs in Relation to Human Resources and Population Problems* (Milbank Memorial Fund, 1950), p. 139.

The decisive period of Western industrialization was not affected by such pressure of population. A high rate of mortality accompanied rapid urbanization and a general drop in the death rate did not occur until economic development was well advanced. But in many underdeveloped countries a declining death rate precedes the initial thrust of development. The New World still had in the nineteenth century vast open spaces for emigration and expansion, but the excess population of most underdeveloped countries today has hardly any place to go.

We are, therefore, facing problems of an urgency which did not exist in the past, except under conditions of national emergency. Unless and until the rate of growth of national income exceeds the rate of population growth, no country can claim to be safely launched on the path of development. Some experts think that only a massive push of capital investment can achieve the necessary acceleration; others believe that many decentralized improvements can increase output even more rapidly. In any case, large amounts of capital will be needed to step up the rate of growth. What are the prospects that sufficient private capital will be invested? To answer that question, I propose to compare capital formation at the time of the "original" industrial revolution with present conditions.

The new technology of the eighteenth and nineteenth centuries was built on a solid basis of preindustrial wealth. Manufacturing with hand-operated equipment had been proceeding on a large scale and had created many fortunes, large and small. World-wide trade (including some unsavory and now extinct forms—for example, the slave trade and the exploitation of the native's ignorance of fair trade values) produced large profits in Western Europe and in the North American colonies. The new machines made still more goods for trading and the steamboat increased the turnover of capital. New territories opened more opportunities for vast profits—from land rent, from more and cheaper raw materials, and, finally, from local foreign investment. Meanwhile the rate of profit in industry was high. Over several decades of gradual diffusion of a long series of innovations, the pioneers reaped large intramarginal profits in addition to a high average rate. A large

[9] *Ibid.*, pp. 127 ff.

part of the growing income went to capital. Wages were low, working hours long, and welfare expenses all but nonexistent.

Once the new technology had been accepted—and frequently not without governmental assistance, as we have seen—investment and the reinvestment of profits proceeded at a high rate. The tradition of frugal living, thrift, and hard work, which created a favorable climate for investment, has been attributed to national or to religious characteristics. But there were vigorous periods of growth in Catholic France, as well as in Protestant England and in Yankee America. Rapid capital formation in Japan was certainly not caused by Weber's "Protestant ethic," but it took place in a similar tradition of self-discipline and dedication to the growth of the family business, bolstered by a number of measures for involuntary savings.[10]

Today we find in underdeveloped areas a very different pattern of savings and investment habits. Most of these countries have been for centuries under economic domination by more developed nations. Profits from trade went largely to nationals of the metropolitan power; competition from machine-made products prevented the formation of capital from preindustrial manufacturing and destroyed a great deal of what had existed. Extractive industries, plantations, etc., were usually foreign-owned; much of their profit was transferred abroad in the form of low export prices or through dividends and interest.

Thus, underdeveloped countries do not have such a broad basis of preindustrial wealth as the developed countries enjoyed in their heyday. A large part of current profits is dissipated in a costly display of wealth and social status; inequality of income does not, as in the old days, assure a very high rate of savings. Moreover, the share of labor started to increase long before the industrial transformation was completed. The claims of labor for higher wages, better working conditions, health and social security measures cannot be ignored as they were in similar periods of early development in other countries.

Finally, existing investment habits do not favor rapid economic development. A very large part of accumulated wealth is still held in real estate and other unproductive forms. Commercial and speculative ventures and money lending and other short-term activities are still preferred to long-term investment. Domestic enterprises, including industrial ventures, are now developing in some countries, but many are not devoted to essentials. Unlike the industrial nations at the peak of their development effort, underdeveloped countries today combine a low propensity to save with an even smaller willingness to invest in productive enterprises. The flow of private foreign capital into these countries is also much smaller than in the past. It is not likely to increase much in the near future, if present indications can be trusted.

---

[10] Edwin P. Reubens, "Foreign Capital in Economic Development: A Case Study of Japan," in *Modernization Programs in Relation to Human Resources and Population Problems* (Milbank Memorial Fund, 1950), pp. 115 ff.

Another item has to be added to our list of current obstacles to rapid private development: the cost of "catching up" keeps rising. Our present capital-intensive technology developed gradually over a period of more than one and a half centuries; the epochal machines of the industrial revolution were, by modern standards, simple and relatively inexpensive gadgets. We may admit that a low-wage economy can use a somewhat less capital-intensive technology than the most advanced countries, yet the amount of capital per worker and per unit of output currently required is very large in relation to the low total incomes of underdeveloped areas. To obtain a specified yearly rate of advance requires a greater proportion of total income in "retarded" countries than in developed nations. As time goes by, the penalty of being late rises: the gap between rich countries and poor countries grows wider.

III

These are, then, the crude conclusions from our historical survey: Initial sources of capital are much smaller and the formation of new capital is proceeding at a much slower rate than in the nineteenth century. The share of labor and the cost of welfare are rising. The minimum cost per worker of modern equipment is much higher than in earlier periods. A high rate of investment is required to keep ahead of population growth, but the actual rate of private investment in productive projects is insufficient for such a rapid advance.

How, then, can underdeveloped countries accelerate their pace? It seems natural that they should look to the state for assistance and guidance. We have seen how past situations of urgency resulted in increased governmental activities. The greater speed which is presently indicated seems to call for even more aid. It is, therefore, not really surprising that the state encourages and promotes private initiative by a large number of incentives, in addition to loans or capital aid. Basic or very risky enterprises are often financed by the state directly or through semiautonomous agencies.

Growing concern with public welfare is causing numerous shifts of income and of sacrifice. Every inducement used in promoting industry also involves a redistribution: a sacrifice is imposed upon the taxpayer or the consumer to stimulate investment. Equalization of incomes by means of public welfare schemes may imply compulsory savings as a substitute for the historic process of capital formation from high incomes. Capital formation thus becomes a matter of public concern, and public investment may follow logically, though not necessarily in fields which compete with private enterprise.

This is, in essence, what happens today in most underdeveloped countries in the guise of development banks, *financieras,* or state enterprises. It is desirable that the economist understands this development in its historical framework. He will then be better equipped to evaluate the reality which confronts him on foreign missions or in survey reports which are becoming increasingly available.

However, a confusion of state intervention with socialism would be a block to realistic evaluation. Socialism implies the permanent displacement of the entrepreneur by the state in the entire economy. Historically, however, as we have noted, a limited period of increased government assistance to development has always been followed by more private initiative. Unless this sequence is understood we are in danger of opposing a historically sound course abroad.

DISCUSSION

HAROLD F. WILLIAMSON: The topic of this session is certainly one of the most challenging and most complex subjects in the whole field of the social sciences. How ever much the merits of a Point Four proposal may be debated, it still constitutes the most significant positive program that the United States has been able to offer a world torn by ideological conflicts. Our success in implementing such a program will be conditioned by our understanding of the processes of economic growth. The four papers presented have given some indication of the diversity of the factors or influences that have affected modern industrial or economic development. Each speaker has made fruitful suggestions as to how his particular subject may impinge on the structure and functioning of an economy. I am sure that another group of equally distinguished scholars, drawn from other special fields, would illuminate still other facets of the subject.

This is all to the good. It is important to approach the problem with as much sophistication as possible. It is salutary for the practitioner in a particular discipline to realize that he holds no monopoly of the concepts or analytical tools necessary to make a diagnosis or suggest a remedy.

This approach alone, however, may well bring us to the dilemma of the blind men and the elephant. We need not only to look at the process of economic development as a whole, but we need to know more about causal relationships. This is not to suggest that, like the Marxists, we can come up with a monistical theory of history. But it should be possible to indicate which of the variables influencing economic development are relatively dependent. To the extent that this can be done we would have the basis of a dynamic theory of economic development. This is not easy task. It is probably no accident that economic theorists have largely concerned themselves with static models; that economic historians have tended with notable exceptions to limit themselves to describing the evolution of economic institutions. The path of those who have attempted broad generalization has been a thorny one. Yet it seems to me that the time has come to encourage the efforts of those who will make such an attempt. The frontiers of knowledge have been pushed back on so many specialized fronts that we need to reassess and synthesize the results in the expectation that a more acceptable and useful set of generalizations will result.

These remarks are not a criticism of the papers presented at this meeting. It was not the assignment of the speakers to present their topic in this sort of framework. Yet I am impressed how, explicitly or implicitly, each paper suggested certain interrelationships with other topics. I am encouraged to think that even more can be done along this line.

WARREN C. SCOVILLE: First, I would like to make a few comments on the role of the state as developed in Mr. Aubrey's paper; then, I shall consider Mr. Brozen's "Invention, Innovation, and Imitation."

The last paragraph is obviously the most important part of Mr. Aubrey's discussion, but for this critic it is also the most obscure. Let me quote: "Where totalitarian methods reign, political control preceded complete economic control by the state; historically, a period of increased government assistance to development has always been followed by more private initiative." I seriously doubt whether the precedence of political control over economic control is the crux of the issue as to whether state intervention in economic development may lead to socialism or some other totalitarian regime, on the one hand, or to free enterprise capitalism, on the other. Can any government institute economic control without first having gained political control? Certainly under James I and Charles I the English crown tried to strengthen its political power, and without some success in this sphere it could never have gone as far as it actually did in trying to determine the direction of trade and industry. Who would deny that in Bourbon France political control preceded economic control or at least developed simultaneously? Or that the same thing was true in the Prussia of Frederick the Great or in the Germany of Bismarck? Surely this cannot be what Mr. Aubrey means by the precedence of political control over economic control.

Far more significant is the question of the underlying theory and form which state assistance takes. The history of Western civilization seems to reveal that whenever the state has attempted to assume the functions of the entrepreneur in making basic economic decisions, the development of free enterprise capitalism has been slowed rather than hastened. In England, France, and America the increasing vitality of individual initiative and private entrepreneurial action were able to gain supremacy during the nineteenth century in spite of and not because of the earlier attempts of the state to interfere. In Germany, Italy, and Japan it appears that the converse was true. If state assistance takes the form of setting up government industries, creating private monopolies, controlling the labor market, directing the flow of capital funds among various industries, or deciding which basic resources shall be developed and how they shall be allocated, then totalitarianism is strengthened. If, on the other hand, state assistance concerns itself with shaping the institutional framework so that domestic capital can be accumulated and foreign capital attracted, so that monopolistic controls over production and technology cannot thrive, so that the laboring population can realize its full potential through improved general education and occupational and geographic mobility, or so that the entrepreneurial risks resulting from arbitrary government action can be lessened, then free enterprise capitalism can flourish. Mr. Aubrey not only does not suggest which kind of government interference is desirable, but he does not show an awareness of the fundamental differences in these alternative forms of state assistance. The governments in England, France, and the United States during the nineteenth century used their political power (and more sparingly than Mr. Aubrey apparently believes) to further the growth of their economy for its own sake; the German, Italian, and Japanese states were interested in developing their industries and trade primarily to increase their political power.

Before commenting on his other basic conclusions drawn from history, I would like to make one observation. If, in attempting to evaluate the role of the state in the economic development of backward countries, one seeks guidance from history, the relative rates of growth of various European countries over the past four or five centuries would probably prove more enlightening when correlated with government policy than the trends revealed during and immediately following what Mr. Aubrey calls the " 'original' industrial revolution"—by which I assume he means the renewed acceleration of economic growth in England from 1760 to 1832.

My comments on his other basic conclusions will be brief. When Mr. Aubrey states that capital accumulation is "proceeding at a much slower rate than in the nineteenth century," it is not clear to me whether he means in the backward countries today as compared with similarly classifiable countries a century ago or whether he means in the world at large today or only in the advanced countries today. Likewise, when he speaks of the share of the national income going to labor and the cost of welfare as rising, does he have reference to the advanced countries or to those which may be classified as backward? In the argument, he evidently means that in the backward countries labor and social security costs have risen so much as to render the domestic accumulation of capital difficult. I myself was not aware that the labor and social security costs in these countries had become alarmingly great. Next, he fears that population will tend to outstrip productivity, thereby increasing the difficulty which backward countries must face in their attempt to catch up with their more advanced neighbors. In Western Europe during the past five centuries whenever the national income increased substantially and the productivity per worker rose, not only did total population increase, but so did the standard of living. Both the death rate and the birth rate are functionally related to the actual and customary standards of living. Why the relationship presumably would be different, say, in Indo-China today than it was in Western Europe during the nineteenth century is not explained.

Finally, I would like to direct attention to the conclusion that "the minimum cost per worker of modern equipment is much higher than in earlier periods." If he means this in absolute terms, the statement though unquestionably true does not appear to be very pertinent to the comparative difficulty of industrializing backward countries today as compared with the early or middle nineteenth century. It seems to me that it is the cost of equipment per worker relative to the standard of living and the national income which is significant. Furthermore, as Mr. Brozen ably demonstrates in his paper, it may well be uneconomic to try to transplant a technology and high capital-to-labor ratio from Western Europe to other areas where the resources and market patterns are quite different. If the governments of all backward nations tried through direct action to adapt the industrial pattern of the United States to their own economy in a relatively short period of time, I feel sure that it would not only be economic folly but would inevitably result in some sort of a totalitarian state. Even the technical and economic advantages endemic to a laggard imitator would be insufficient to counterbalance the costs which a complete disregard of the principles of comparative advantage would entail.

Turning now to the paper on "Invention, Innovation, and Imitation," allow me to state at the outset that I think Mr. Brozen has done an excellent job with an extremely difficult subject. I, for one, shall be very interested in his forthcoming book on *Social Implications of Technological Change.* In dealing with the problem, he tries to use the technical concepts and language of economic theory and to make the problem as concrete and tangible as possible. It strikes me that he has approached success closer than most writers. This partially accounts for the freshness he imparts to many ideas which have already been treated at length by such men as Schumpeter, Veblen, and C. E. Ayres. In one sense it is unfortunate that his essay attempts to deal with all three levels of technological change (invention, innovation, and diffusion) because it would be humanly impossible satisfactorily to handle in brief compass all the problems which such a summary exposition is bound to raise.

I have two major criticisms (or, better still, suggestions) to make at this time. The first has to do with the difference between cost-reducing and demand-increasing innovations. Although Mr. Brozen recognizes the difference, he appears to be mainly concerned with the former and introduces the latter rather tangentially when he is discussing the legal or market limitations upon a firm's ability to reinvest its profits in ways which primarily increase the scale of operations. Then again in his conclusions he discusses briefly demand-increasing innovations. Since such innovations as the development of new products and the improvement in the quality of old commodities have different effects on the market structure than do cost-reducing innovations, and since in the broad sweep of the past several centuries the former appear to have played a major (if not the most important) role in bringing about the spectacular increases in the standard of living, it would seem desirable to analyze the factors conditioning the rate of invention, innovation, and diffusion of demand-increasing techniques just as fully as the factors affecting cost-reducing techniques. Furthermore, it appears that many of the major advances in technology have been of both types (for example, bottle blowing machines resulted in both reductions in cost and also improvements in quality of output) or at least have occurred amid a cluster of innovations which included examples of each.

My second major comment relates to Mr. Brozen's analysis of the market situation and its effects on the rate of technological change. It is clear from his concluding paragraphs that he places great stress on this relationship. He states that "innovations and imitations are more rapid in competitive markets" whereas inventions come more rapidly in noncompetitive markets. He also concludes that demand-increasing innovations tend to occur at a higher rate in imperfectly competitive markets than in either perfectly competitive or monopolistic markets. In order to reconcile these statements, one must infer that Mr. Brozen thinks purely cost-reducing innovations and imitations are quantitatively more important than hybrid or purely demand-increasing innovations. This may well be the case although some economists may be prone to question the conclusion on empirical grounds. The point of my comment is that Mr. Brozen nowhere presents an adequate analysis to support his conclusions. In the first part of his paper on the rate of diffusion a short paragraph sets up a specialized case under perfect competition, but even here some of the assumptions must be inferred. Although I am inclined to agree with his conclusion that the rate of diffusion of cost-reducing techniques tends to be greater in a perfectly competitive market than in those where gross imperfections exist, I do not think he adequately demonstrates the point. Would not "expected" variable costs and "expected" average costs be more significant than actual costs? If so, there are many factors influencing these expectations which Mr. Brozen fails to take into account. His analysis of the role of the market situation on the rate of innovation and invention is even more sketchy than his analysis pertaining to the rate of imitation.

I realize that the speaker could not possibly have dealt with these matters adequately within the time limits set for him, so the two comments I have made thus far should be considered as suggestions for a more detailed exposition rather than criticisms of his paper. The remainder of my comments can be briefly stated. They reflect my predilection to emphasize certain factors in his analysis more than others rather than suggest possible areas where his analysis should be expanded.

Economic historians, among others, have always been struck by the coexistence in the same industry of both backward and advanced techniques in the same resource and market pattern. I think Mr. Brozen is logically consistent in his analysis of the situation in which there is (1) a great discontinuity between handicraft and power-driven techniques, (2) one dominant industry in an area, and (3) a ratio of labor to capital supply which falls between the maximum ratio for handicraft and the minimum ratio for machine production. But I doubt, in view of the existing mobility of capital between industries and areas of one country, whether this sort of situation is very important in reality. The coexistence of both backward and advanced techniques which does exist in many industries is probably due to gross imperfections in competition. Handicraft and simple machine methods were still in use in American glassmaking after complicated and very expensive automatic machines made their appearance. This situation was due to "live and let live" policies adopted by the companies using the advanced techniques, by the preference of skilled glassworkers to cut their wages rather than shift to other industries or give up their skills, and by the "small order" character of demand for certain types of glass containers.

Again, I am more inclined to emphasize the freedom of entry into an industry of new ideas, new managerial blood, and new entrepreneurial talent as an important factor affecting the rate of invention and innovation (and even of diffusion) than I am the freedom of entry of new firms. Professor C. E. Ayres in his *Theory of Economic Progress* has emphasized the role of the "amateur" in this respect. Mr. Brozen, of course, has not been unaware of the importance of free entry of inventive and innovating talent; he simply does not appear to accord it as much weight as I would. Similarly, in regard to the relationship of capital supplies and the rate of innovation, I would emphasize such socioeconomic factors as the competitive spirit, the willingness of capitalists to assume risks, and the attitude of businessmen toward innovation rather than the absolute abundance or scarcity of new capital. If old capital in an industry yields zero or near-zero returns, new capital may still be forthcoming if it is likely that an innovation will yield substantial returns on the new investment and if capitalists are willing to assume the risks entailed in a new venture.

I suppose that all economic historians have been impressed with the shift of technological leadership from one country to another. Veblen in his *Imperial Germany and the Industrial Revolution* suggested that Germany was able to assume the leadership in the second half of the nineteenth century because other more advanced countries had become enmeshed in the vast amount of "sunk" capital in their old pioneering industries, in what he conceived as a stultifying overlay of technologically useless institutions, and in the emergence of a leisure class. These matters have not escaped Mr. Brozen's attention, but one may hope that he will at some future date subject such socioeconomic factors to an extensive, systematic investigation.

Finally, I would like to suggest that Mr. Brozen's analysis of the optimum rate of development of technological possibilities is basically a theory and justification of knowledge. If there is any area in human experience where the application of economic techniques and evaluations is misleading and dangerous, I believe it is here in this sphere.

GOVERNMENT ACTION OR PRIVATE ENTERPRISE IN RIVER VALLEY DEVELOPMENT

A DESIRABLE NATIONAL WATER POLICY

By W. W. HORNER
Horner & Shifrin

At the instance of the American Society of Civil Engineers, the Engineers Joint Council, which is the co-ordinating body for the five national engineering societies, in August, 1947, "took steps to institute the creation of a National Water Policy Commission charged with the investigation and reporting—among other things—upon the several elements affecting the orderly and economical development of the water resources of the country."

In 1948 the National Water Conservation Conference presented a memorandum to the Hoover Commission which stated in part:

> The necessity for comprehensive, basin-wide development of the water resource is now fully recognized. This objective, however, cannot be attained in all cases without the guidance of clearly defined policies, principles and procedures, established by the Congress.
>
> There is today no clearly defined National water policy. This situation is recognized in Congress, and is fully understood by those who have occasion to deal with the subject.
>
> Water conservation, utilization and control is carried on today by various Federal agencies, under regulations and laws adopted at various times, which are not adequately integrated. Often action by Congress has been prompted by expediency, and by unrelated public demand from various parts of the country. The body of law regulating the activities of Federal agencies in the water field has grown up like "Topsy." The nation in this important endeavor has in the past proceeded, and at the present time continues to proceed in a haphazard way.

In 1948 the report of the Policy Committee of the American Water Works Association used similar language, and added:

> There are competitive interests involved in the development of water resources, there are variable plans for development, conflicting financial methods which might be applied, and in some very important areas insufficient water to go around. There are great networks of interstate streams, representing in their watershed interests a very large part of the entire United States.
>
> When to these complications are added the competitive interests and jealousies of individual states—and, at times, of parts of the same state—and of various Federal agencies, the result is a situation of conflict which has been brewing for well over a century.
>
> Some anomalous conditions are created by the participation of distinguished Senators and members of the House of Representatives in certain powerful voluntary groups. It is one of the few instances, in the determination of the national policy, where members of Congress sit on both sides of the fence.

During several years past, the Bureau of the Budget has been attempting to review the economic justification of water resources projects proposed for appropriation. Apparently it was finding increasing difficulty in discerning any well-defined policy which might guide its action. It is possible that the public expressions such as I have quoted above may have been a factor in strengthening the Bureau's conviction that a complete revision of national water policy was needed. It is understood to have been at instance of the Bureau that President Truman, by Executive Order of January 3, 1950, set up a temporary Water Resources Policy Commission. In his letter to the chairman of that Commission occur the following statements:

> On several occasions, during the recent session of Congress, I called attention to the need for developing a consistent and comprehensive policy with regard to our whole water resources program. In many cases, piece-meal or partial approaches to a problem as broad as water resources development tend to confuse, rather than clarify, many of the basic, underlying issues. It is essential in my judgment that a comprehensive study and review be made of all existing water resources legislation and policies, and that recommendations be made in the full knowledge of national needs and objectives:
>
> The Federal Government already has a substantial investment in existing water resources improvements; in recent years we have been adding to this investment at a rate of more than $1 billion annually. These facts alone make it imperative that individual projects be properly related to the total water resources program, that they be undertaken in logical and orderly sequence and that they be scheduled to conform to fiscal and other national considerations. It is even more important, however, that the policies underlying these programs be soundly conceived in terms of national needs and objectives, and that they are adopted in the light of our goal of a stable and expanding national economy.

In response to the invitation by the President's Temporary Commission, the Engineers Joint Council prepared and, in June, 1950, filed with it a "Statement of Desirable Policy with Respect to the Conservation, Development and Use of the National Water Resources." Throughout this statement, desirable policy is closely related to economic considerations. My presentation herein generally follows the findings of the statement.

Within the policy field there are at least four major economic questions as follows: economic considerations involved in the justification of individual projects of programs; those involved in the matter of priority of undertakings; the economic equity between the interest of the nation's taxpayers and those of the direct or discernible beneficiaries; the relation of the rate of investment of the national income in water resources development to other factors of the national economy. We will find these and other economic questions involved in the material which follows and which is quoted from the Engineers Council document:

> Certain fundamental axioms, simple in character but profound in impact, provide general criteria for considering national water policy. These axioms may be reduced to two statements: (1) that public money is limited in availability and (2) that many public needs, such as water, highways, schools, hospitals, etc., compete for public money.
>
> In the last 20 years, national, state and local water development has reached a level where it represents billions of dollars of expenditure annually instead of the millions per year of the period prior to 1930. With the advent of multiple purpose development, and other fundamental changes in national policy, undertakings have increased in size, complexity, geographic distribution and functional competition.
>
> Today no single part of the country is in such undeveloped or overdeveloped state

from the water resources standpoint, as to require neither thoughtful preparation and planning, nor equally thoughtful translation into action. If water functions have increased in numbers and in geographical distribution, the number of Federal agencies necessarily involved historically in these developments likewise have grown. As these have risen in stature, their overlapping functions have become increasingly striking, and their competitions have become impressively expensive.

It is well to state at the outset that placing the responsibility for the chaotic situation in which the country now finds itself is neither simple nor fruitful. This is particularly true in view of the fact that no inconsiderable part of the difficulty which the country now faces is largely due to Congressional action and directive, by which Federal agencies are both bound and involved. It is likewise true that animadversions against one or another of the two principal political parties bear equally little fruit. When authorization and appropriations for major water resources development, good and bad, leave the Federal Congress, it is striking to note, as recently as 1950, that both political parties respond almost unanimously to pressure and trading.

Conservation and control of the waters of the United States are in the national interest, but not necessarily a function of the Federal Government. On the contrary, that which can be done by the individual should be done by him, and that which requires collective action should be done at the lowest governmental level practicable. The Federal Government should engage in the conservation and control of waters only when the collective action of all of the people of the nation is necessary for accomplishment of the objectives.

Such collective action, through the medium of the Federal Government, is justified for only two purposes.

First, to do those things which are essential to the national defense or otherwise of substantial benefit to all of the people throughout the nation; and

Second, to aid in the financing of the cost of construction of works for the benefit of a limited number of people, on terms equitable to all other citizens of the nation.

In the discharge of the first function the Federal Government is acting as trustee in the disbursement of tax revenues on a non-reimbursable basis for the general benefit. It follows that such expenditures should be made for those purposes which will produce the greatest benefits to the nation as a whole. This responsibility goes far beyond any determination of feasibility; it requires a determination of what is best, not merely what is good.

In its performance of the second function the Federal Government is basically acting as a banker responsible for the soundness of his loans. It is fundamental to this function that such loans should be repaid with interest.

It is also fundamental to this function that those who benefit directly from the construction of such works for the conservation and control of water should repay all costs properly allocable to the production of such benefits; furthermore, where indirect benefits will accrue to a region in greater degree than to the nation as a whole, the people in that region should repay a like proportion of all costs not allocable to production of direct benefits.

All non-reimbursable expenditures and all subsidies, regardless of the source of payment, should be considered as being for the general benefit, and should be compared with the benefits which could be derived from the expenditure of like sums for any other purpose and at any other location. Only such portions of the total cost as will actually be repaid with interest by beneficiaries can properly be excluded from the test of comparison.

In computing the costs of Federal water developments for determining economic justifications or for any other purpose, there should be included amounts equivalent to the taxes which would have to be paid were the lands, physical improvements and business, if any, not exempt from taxation, whether Federal, State or local.

There is pressing need for ascertaining the costs of fulfilling the respective functions of a Federal multi-purpose water development. Distribution of costs in proportion to benefits is improper for the purpose. For application generally and uniformly among Federal agencies, in apportioning the costs of jointly-used facilities, the Proportionate-Use-of-Capacity Method is recommended.

For determining project justification, there should be established criteria which are applicable to all functions of such development and to all Federal agencies concerned.

So far as practicable, Federal water projects should be self-supporting.

The present rate of planning and Congressionally authorizing water resources developments is excessive and economically unsound.

As to new projects, in general there should be no further authorization until uniform national policy has been adopted.

> *Domestic and Industrial Water Supply:*
>
> The use of water resources for domestic and industrial purposes is believed to be the highest and best use. Without adequate water supply properly safeguarded against pollution, urban life cannot exist.
>
> Although nation-wide in development, domestic and industrial water supply present essentially local community problems. Of the 13,000 public water supply systems serving 85,000,000 people in the United States with approximately 15,000,000,000 gallons of water per day, nearly all are intra-state. Only a few have interstate problems, and a very limited number are concerned with more than two states.
>
> Urban or private industrial water supplies should accordingly be built and paid for by those using the service. The cost of water from public supplies, which is usually less than 2¢ per capita per day, is within the economic reach of all.

I want to interpolate here that we have seen proposals by Federal agencies for projects which are 90 per cent domestic and industrial water supply. The present theory seems to be that they are properly federal projects if they contain 2 or 3 per cent of flood control or reclamation benefits. Quoting again:

> Contrary to general public belief, there is no experience basis for the fear that the availability of water resources, surface or underground, is declining. Shortage of water is neither universal nor increasing. Synchronization of development of and use, on occasion, has been inadequate. Declining, underground water levels prevail in some areas, with excessive ground water rises in others. On a national scale, however, there is little evidence to support the prophets of doom in the water resources field. Intelligent husbanding and allocation are the keys to the future.
>
> *Flood Control:*
>
> Flood Control is of vital concern both to Federal and local interests. It should be effected by cooperative efforts between them. It should not be the sole concern of the Federal government.
>
> The policy of Federal participation in flood control should be based on the equitable principle that the cost of providing flood control should be borne proportionally by those benefited therefrom. Therefore, Federal interests should contribute, the same as others, and no more than their share of such cost commensurate with the benefits they rceive.
>
> The Federal government, wherever necessary or expedient, might make loans to local interests for development by them of an entire flood control project or for that portion of the cost thereof which Federal interests are not justified in assuming; or it might construct such projects in their entirety on a prorated reimbursable basis, with Federal aid commensurate with the national benefit.
>
> The development of means for holding soil in place on watersheds and particularly on agricultural lands is of vital concern not only to the Federal government, but more particularly to local interests represented by soil conservation districts organized under state laws.

On tillable land of such topography that soil is likely to be carried away through erosion by wind and rain, the benefits of withholding the soil, to the owner, are so obvious as to require no proof; hence there can be no justification for "incentive payments" to landowners for such soil conservation measures.

> The emphasis for all soil conservation measures should be sustained utilitarian usage, and not for the primary purpose of flood flow retardation. Flow retardation should be regarded as a by-product of national value, and as such might justify federal aid (but on the basis of relative benefits, such aid would be a small part of the cost).

In my opinion the broad language of the 1936 Flood Control Act and the resulting interpretations of it appear to be one of the principal causes of the present policy confusion.

The Act declared flood control to be a national responsibility; that projects under it are justified whenever the benefits to whomsoever they may accrue exceed the cost; and they require due consideration of hydroelectric power, water supply, fish and wildlife, and recreational uses.

Out of consideration of hydroelectric power we have come to have flood control and navigation projects which are 90 per cent or more power projects.

Out of "benefits to whomsoever they may accrue" which exceed the cost there are examples of proposals for which as much as 40 per cent of the accounted for benefits consist of alleged recreational and wildlife values, generally of local or regional significance, or of accounted for "enhancement of value" of private property, over and above the value of flood damages abated.

The language of the Act is open to such interpretations, and Congress in its project authorization approvals has given some of them tacit endorsement.

I, for one, doubt that the Congress which passed this Act realized that it was providing for local recreation at federal cost or was justifying the expenditure of the federal taxpayers' dollars to enhance the value of private property.

Inland Water Transportation:

The inland water ways of the United States, if converted to one continuous channel, would extend around the world and would include 480 locks and dams and 270 harbors along the way.

A number of inland water ways projects are in existence today that are completely devoid of any justification. Certain of these have virtually been abandoned, while others have never generated the traffic anticipated.

We believe that no new artificial toll-free canals should be constructed and that study should be given to the practicability of levying charges upon the users of other types of navigational improvements. This study should be undertaken as part of a program of general discontinuance of public subsidies.

The use of inland waterways, as a regulatory agency, to force reductions in rates on land carriers should be abandoned.

Land Drainage and Irrigation:

Irrigated lands now amount to about 22,000,000 acres. Projects now under way or under consideration involve more than 13,000,000 acres of reclamation and nearly 8,000,000 acres of supplemental irrigation. The most economical projects have already been undertaken.

There is a progressive trend toward shifting the entire burden onto those who bear the expense of government through taxation. Unless the development of the water resources of the United States is to be permitted to degenerate into the diversion of the national income for the benefit of particular regions or classes of people, and for political expediency, there must be a reversal of the present trend

Reliable sources indicate there are 97 million acres of wet swampy and overflowed lands in the United States, not in organized drainage districts, of which 20 million acres could be drained at a reasonable cost.

> Although an extension of Federal participation to this field is not considered desirable, nevertheless, when the direct benefits can readily amortize the project, there is no reason why such participation is not a sound national policy in those cases where the indirect benefit greatly exceeds the Federal contribution necessary to the execution of this project, but, in no case, should a drainage project be approved if the cost per acre is greater than the value of productive land similarly situated.
>
> The expected continuation of present trends toward higher productivity of land now under cultivation can provide food and fibre for the expected population growth, and improvement in national diet. Demonstration of need should be the first step in the determination of the economic justification of national expenditures to put new land under cultivation.
>
> No future projects for the reclamation of land for agriculture, by drainage or otherwise, should be deemed economically feasible unless and until such needs shall have been clearly demonstrated.
>
> Lands awaiting reclamation through drainage and irrigation are not deteriorating and should be regarded as a useful reserve for future needs.

Hydroelectric Power. After reviewing Engineers Council's statement on hydroelectric power, I am offering my personal summary.

Congress has never stated a national power policy. Present programs rest largely on implications and interpretations of the Flood Control and Reclamation Acts and on confirmation implied in Congressional approval of projects under these Acts. Few citizens realize that the power programs under these Acts have reached a magnitude of many times that under the TVA development.

There is unquestionably a real need for the expansion of power production. Many feasible hydroelectric projects are of such magnitude as to probably preclude their development under private financing.

Probably many of the power projects complete or under construction under the Flood Control and Reclamation Acts are economically justified and could readily be made self-liquidating. One possible approach to a sound economic policy in this field might be the statement by Congress of an outright policy for federal power production, the setting up of an agency to direct the program, with the financing based on prospective revenue, through federal credit outside the federal budget. Such a direct approach would avoid some of the present queer practices, as, for example, where a part of the revenue from sound power projects may, under multipurpose conditions, be diverted to the reclamation fund and used to provide for irrigation features not otherwise financially feasible; or where power income may be evaluated on one basis by one federal agency for project justification purposes and may later be marketed by another federal agency at a materially lower rate.

In recent years Congress has come to a new procedure of approving water resources development by "basin plans." The principle of planning for water resources development on the drainage basin unit is definitely desirable and sound, but for some of these plans there has been an accounting showing an economic justification for the individual projects included and for others, justification for the plan as a whole with the possibility of uneconomic elements being obscured in the summation. With respect to some of these basin plans there has been no clear-cut presentation from which economic justification could be determined. When the desirable principle of drainage basin planning is reduced to this situation, water policy and economic considerations appear to be at the point of parting company.

A by-product of the basin plan device is an interpretation that all projects entering into an approved plan are thereby approved for construction by the federal government. The interpretation has been carried further by one federal agency which has argued that the Federal Power Commission is precluded from licensing construction of any of such projects by private capital.

The Engineers Joint Council statement is a document of 150 pages. I have held my synopsis of it to twenty minutes, to have time for a comment on the report of the President's Temporary Commission.

This report, carrying the title, "A Water Policy for the American People," was released on December 17. My copy became available on December 21. The report runs to 400 pages and will require very careful study for a full understanding of its implications. Engineers Joint Council has instructed its ninety-man task force to review the findings and to prepare a public statement with respect to them. Such a review may require a period of sixty days or more. It has been possible for me only to give the report a first reading, and I can give you here only may personal first reactions.

The report confirms the original Engineers Council statement in many respects: For example:

> There is today no single, uniform Federal Policy governing comprehensive development of water and land resources.
>
> This is a time for action based on sober consideration of objectives and methods. Continuation of present policies, or lack of them, will mean a continuing waste of money and effort in the pursuit of conflicting goals.

Although not permitted under the President's order to make recommendations for over-all administration of water resources, it proposes that planning procedure be through drainage basin commissions made up of federal agency representatives under an independent chairman and with advisory boards representing the interested states. Except for the independent chairman, this is identical with the procedure set up by Congress in 1950 for the Arkansas Basin and for New England.

The report agrees with the Hoover Commission and with the Engineers Council statement in setting up a board of review. The duties of this board would be to develop improved evaluation techniques and standards and to review and co-ordinate the plans of the various drainage basin commissions.

All federal agencies in co-operation with the states are to review all existing plans and programs. No new projects are to be put under construction until confirmed by such review. The board of review is to develop a six-year program of confirmed projects, with the annual program to be adjusted somehow to national economic levels.

Many of the recommendations closely parallel those of the Engineers Council, as for example that public water supply remain a local responsibility and that ascertainable direct dollar benefits become reimbursable to the federal government. It is suggested that this may be done by agreement with the states through the levying of taxes or assessments. Tolls are to be levied on inland waterways, but only as a part of a new national transportation policy.

Evaluation procedure and principles are to be the same for all functional features of programs.

It is proposed that irrigation and public power be divorced, and that a pre-essential to irrigation undertakings be a finding by the Department of Agriculture of a need for additional productive land, after a full consideration of the increase in rate of production on existing lands. However, when undertaken, such irrigation projects are assumed to be justified by a national benefit, the cost—less reimbursement from the farmers on an ability-to-pay basis—being chargeable to the federal taxpayers. While weight is to be given to the comparative cost of alternate projects for new lands, other safeguards would seem to be needed against uneconomic undertakings. In the fields of hydroelectric power and of project evaluation, the Engineers Council and the Temporary Commission are far apart.

With relation to hydroelectric power, the report proposes to clarify the situation with a flat statement for the first time of a specific policy. The recommended policy would make full development of the remaining hydroelectric power potential a major responsibility of the federal government, and in the future licenses for nonfederal development would be issued only with the joint consent of the federal agencies.

With respect to the evaluation of projects, the report makes a strong recommendation for clear-cut accounting of costs and of those benefits which can be appraised in dollar values, this appraisal to include secondary benefits so as to provide an approximation of the total resulting increase in national income. This seems to provide for a material judgment factor, but in addition, if on this showing the benefits are less than the cost, the basin commissions may make a statement indicating that essential benefits important to the general welfare are of sufficient additional value to warrant construction. The political economic philosophy of the Commission may be indicated in the following statements:

The Commission is convinced that the measurement of direct benefits and costs in dollars is a basically useful tool in program evaluation and project selection, but that it must be supplemented by other measures if sound decisions are to be reached in the public interest.

The assured permanence of our resources base would strengthen the foundations of our culture, institutions, and way of life. Improved productivity could relieve poverty, malnutrition, and insecurity among low-income groups. A widespread sense of well-being, hopefulness, confidence in the essential soundness of existing institutions could be achieved, along with a sense of responsible participation. These are social values of the highest order.

Enough is known to support the judgment that the social values inherent in our water resources are immense and vital to the well-being of the nation.

Increasingly, as the Government has undertaken large investments for public purposes rather than simply to serve private purposes not fulfilled by private capital, the principle of full reimbursement has ceased to be useful or necessary. The Government has come to be recognized as an agency for social and economic action which need not follow the rules of the private capital market in order to obtain the necessary capital or to make investment decisions.

GOVERNMENT ACTION AND PRIVATE ENTERPRISE IN RIVER VALLEY DEVELOPMENT: A PUBLIC ADMINISTRATOR'S VIEW

By PAUL J. RAVER
Bonneville Power Administration

The assigned subject for this discussion is, "Government Action *or* Private Enterprise in River Valley Development." The word "or" in the title implies an alternative of one or the other. I do not agree that river valley development in this country is predicated on any such assumption. I know it is not so predicated in the Columbia valley. The Bonneville Project Act is not so predicated. My administration of that Act has been and is diametrically opposed to such an assumption.

Indeed, our democratic system of government is founded on the basic philosophy that government, where it can properly do so, should help make the free private enterprise system work.

Consequently, the title of my paper changes the "or" to "and"; thus indicating the government program in the Columbia River basin is designed to work with the private enterprise system in expanding the region's economy. Our record demonstrates clearly that this is exactly what it has done and will continue to do if permitted to proceed.

For the purposes of this discussion I will confine my remarks on river valley development to my own experience as Administrator of the Bonneville Power Administration, which has the responsibility for marketing the power generated at Bonneville and Grand Coulee dams as well as from all future federal projects in the Pacific Northwest. In many ways the economic problems we face in river development in the Pacific Northwest are unique because of the character of the river or the structure of the economy and resources of the region. It is upon the basis of these unique characteristics that I should like to explore the premise that the federal government must assume the major role in developmental responsibility.

The Pacific Northwest, which includes Idaho, Oregon, Washington, and western Montana, contains 9 per cent of the land area of Continental United States, but its 1950 population is only 3 per cent of the national total. Nearly two-thirds of the residents live west of the Cascade mountains.

The Cascades divide the region into a humid west and a semiarid and arid plateau to the east. The eastern portion is devoted largely to agriculture, while forests covering much of the area west of the Cascades have, for more than half a century, provided the base for most manufacturing in the region. Over half of the region's production workers in manufactures in 1947 were occupied in various forest products industries.

In the snow-laden Rockies that form the eastern boundary of the region, the Columbia River rises and begins its more than a thousand-mile flow to the sea. The Columbia River and its tributaries account for about 40 per cent of the potential hydroelectric power of the nation.

Power from the river provides the only large expandable energy base in the region. We have practically no oil or natural gas and only a small amount of coal. In the past, industry depended principally on wood wastes for its fuel, but this energy base is declining with increased use of logs and wastes for other purposes. More and more, hydroelectric power is becoming the energy source for industrial expansion. In 1947 manufactures in the Pacific Northwest required 20 kilowatt-hours a man-hour while the national average was only 6 kilowatt-hours.

Until the thirties, the vast resources of the Columbia River were little used for either power or irrigation. By 1935 only 1½ million kilowatts of generating capacity had been installed in the Pacific Northwest—only 20,000 kilowatts by the federal government.

With construction of Bonneville and Grand Coulee, the installed hydroelectric capacity of the region doubled and the federal government became the major supplier. Bonneville was built and is operated by the U. S. Corps of Engineers as a combination navigation and power project. The last generator installation was completed in December, 1943, making an installed capacity of 520,000 kilowatts. Grand Coulee was built and is operated by the U. S. Bureau of Reclamation as a combination irrigation and power project designed to produce 2 million kilowatts and irrigate one million acres of arid land. The eighteenth and last generator will be installed in 1951.

With these two large federal power projects, electric utility systems began looking to the federal government for their needs. In 1949 the federal plants produced nearly 14 billion kilowatt-hours, or 58 per cent of the 23.5 billion kilowatt-hours supplied the region.

Economically speaking, the Bonneville Power Administration, which constructs and operates transmission lines, substations, and other facilities to bring the power to the load centers, is unique in that it is the major supplier of the only indigenous energy base of the Pacific Northwest capable of being expanded to meet the needs of the region. Utilities, both privately and publicly owned, as well as industry, are looking to the federal government to develop low cost Columbia River hydro power to satisfy their increasing electric energy requirements.

Compulsion for federal rather than private development of the Columbia River has been predominantly economic, not political. Here are the basic economic factors which have shaped and are shaping Columbia River development.

First, best interests of the region require that the river be developed for all its uses. This is not an assertive statement of my own. The region generally accepts this notion; although the people seldom express it in this simple, positive fashion, it adds up to the primary economic factor that no one dares not to "develop the river for all its uses."

A second economic factor, basic to Columbia River development, is primarily evident to power technicians. There is a large increment of benefit obtainable through integrated development and integrated river system operation. This incremental benefit is greater than the sum of the benefits accruing from a project-by-project or piecemeal development.

All major utilities in the region are interconnected in a vast network known as the Northwest Power Pool. The federal transmission grid is the backbone of this pool, enabling operation of all projects, public and private, on a co-ordinated basis, to obtain maximum power at the lowest cost. Co-ordinated operation provides about 15 per cent more firm power than could be achieved from the same projects through isolated operation. Water is stored and released when it provides maximum benefit to the region rather than maximum value to a single project.

Co-ordinated operation requires both control of the reservoir operation of all projects on the river system and interconnection by transmission lines. The Hungry Horse project, now nearing completion in western Montana, is an example. The plant operated by itself has 90,000 kilowatts of firm power at the dam. Isolated operation would increase capabilities of downstream plants by 101,000 kilowatts through the release of water from the Hungry Horse reservoir.

With co-ordinated operation, integrating the transmission system with the regional network, continuous capability at the plant is increased to 223,000 kilowatts and increased production in downstream plants to 368,000 kilowatts, or a total of 591,000 kilowatts compared with a total of 191,000 kilowatts for isolated operation.

This net gain of 400,000 kilowatts of salable firm power represents a tremendous economic gain at relatively small added investment for transmission. It is doubtful if this plant would be commercially feasible as an isolated project, but operated as a part of the regional network it becomes a feasible undertaking.

The third economic factor is that hydro power is virtually the only source of energy indigenous to the Columbia basin region. Furthermore, most of this energy potential is contained in the Columbia River. No single state, interest, or enterprise has the abilities to develop this river for all purposes; yet its existence and the existence of the power potential within it are vital to the future economic well-being of the region.

The fourth and, in some ways, most important economic factor basic to Columbia River development is the fast growing importance of the "electroprocess" industries.

The Pacific Northwest must make its contribution to national needs for expansion of the electroprocessing industries. This need is particularly pressing with the program of building up our national defense. In 1939, electrochemical and electrometallic industries consumed 14 per cent of all electric energy required by manufacturers in the United States. During the war in 1943, these electroprocess industries used 27 per cent of all energy required by manufacturing establishments.

In summary, these four basic economic factors—multiple-purpose development, necessity for integration of projects and management, dependence of the region upon a single energy source and the growing national importance of electroprocess industry—have thrown into the hands of the federal government responsibility for Columbia River development.

There is no question that federal responsibility for this development has loomed larger and larger in the public consciousness. To a considerable degree, it is a product of the times that the outstanding aspect of this development during the past fifteen years has been power. Had there been no World War II, for example, it is probable that reclamation uses of the river would have developed at least as fast as the power uses. Defense demands for the products of electroprocess industries, however, have dictated otherwise, and the power aspects of the total river program have thus far overshadowed all others.

This lack of balance in the orderly development of the Columbia River program has created a number of problems. One of these involves the relationship of the federal power program on the Columbia River to the operations of privately-owned utility companies in the region. The Bonneville Act and other laws relating to the sale of power from federal projects provide that publicly-owned systems and co-operatives be given preference and priority in the purchase of power. Power available from early reclamation, navigation, and flood control projects was small and, before 1935, was properly designated as "surplus" power. Usually this represented only a small part of the supply for an area, and none was dependent upon the federal government to meet its existing or probable future requirements.

The federal government, however, is not selling surplus power in the Pacific Northwest in the traditional sense of disposing of surplus property—and after disposing of it, taking no further responsibility for supplying additional demands for the same commodity. The government has developed a long-range plan for construction of multipurpose dams. In so doing it has pre-empted the region's most economic power supply.

Under these circumstances, the preference and priority provisions of the Bonneville Act are tremendously more significant than where a surplus commodity from some isolated dam is being sold by the government.

The private power companies failed until recently to understand the significance of this situation.

As late as 1944, 1945, and 1946, certain utility companies—the Portland General Electric Company was a notable exception—opposed rapid development of the Columbia River power program. "Bearish" forecasts of power requirements in the region were presented by these groups to Congressional committees responsible for providing all funds for the federal development program, including planning, construction, operation and maintenance, management, and administration. Serious delays in starting new dams resulted. The companies made no effort to build new generating supplies of their own. A power shortage developed in the region. And the preference and priority provisions really began to mean something. As a result, the firm power has been absorbed by the rapidly growing loads of the public agencies, many of which are rural in character with no other source of power available. The interruptible power is left to the private companies. The good fortune of favorable water conditions has thus far prevented serious difficulties.

This grievous error in strategy was not only a disservice to the people of the region—and, indeed, of the nation—but has turned out to be a disservice to the customers and investors of the private power companies that made the error. This is not a particularly bright page in the record of the business managed utilities.

At the same time these companies were complaining bitterly that they could not secure long-term firm power contracts from the Bonneville Power Administrator. Without an assurance of a continuing government surplus to sell, such contracts could only have resulted in reversing the intent and purpose of the preference clauses of the Bonneville Act. It would have given the preference to the private companies and left the shortage for the public agencies to worry about.

This failure of certain utilities and some other powerful interests in the Northwest (including the commercial fishing group) to realize the damages implicit in delaying rapid development of additional generation—plus the wartime development of the light metal industry—

is largely responsible for the problems now faced by the private utility companies in the operation of the preferential clause of the Bonneville Act.

Now the situation has changed. The major utilities' estimates of future power requirements are for the most part in agreement with our own. There is also general agreement in the Pacific Northwest that the federal government should expand its generation of power as rapidly as needed and deliver the power to the load centers over the government-owned transmission grid. Thus the region looks to the government for its major supply. It is not a sale of surplus concept. It is a public utility responsibility concept. This is in sharp contrast to the situation in some other river valleys—and thus makes the power problem in the Northwest as unique as the river system that serves it.

If the federal government meets all future power requirements of the region, the basic problems relating to the preference and priority to public systems will cease to exist. However, the idea that the federal government should be responsible for meeting the major power requirements of the region is more fundamental, perhaps, than the problem of relationships with the private utility industry. This idea of responsibility is a definite departure (except for the TVA) from the traditional government policy of selling only the surplus power available from a government dam, giving a preference and priority to public agencies for that surplus, and then taking no further responsibility for the supply of the agencies purchasing the power.

The unique situation facing the federal government in the Pacific Northwest lies in the necessity of maintaining a continuing surplus power supply so that the requirements of all purchasers will always be met. While not a governmental function in the traditional sense, this, nevertheless, is a factor to be reckoned with in the Northwest where hydro is the region's cheapest expandable energy base and yet the multipurpose character of the river control problem requires federal construction of the major portion of the total number of dams to be built.

This poses a number of major problems. One of these is securing the necessary capital in the quantities needed and at the time needed to provide power when needed. The federal government, with full cooperation of the states and local interests, is creating a large productive enterprise in the Pacific Northwest for which the developmental period will extend over some years. The investment requirements for those years will be well in excess of revenues. This is typical of any expanding industry during its formative years.

By reason of the special problems of a business-type operation such as the Bonneville Power Administration, requiring long-range planning and large capital expenditures to meet its full utility responsibility, a more flexible means of fiscal financing than presently provided would give the commonwealth more value for its money.

The benefits of no enterprise, whether public or private, can be measured without adequate controls on financial requirements. Control in the case of private enterprise is exercised in part by the financing itself. It is difficult for an unsound enterprise to raise funds. The operations of the federal Columbia River power administration over the past twelve years have clearly demonstrated the financial soundness of that enterprise.

Yet we are falling short of taking care of the region's power needs despite the fact that repayments of federal investments, based on a maximum of fifty-year repayment after completion of projects, are ahead of schedule. Repayments are from revenues after deduction of all operating costs, a large irrigation subsidy, and interest on the power investment. Only a relatively small navigation and flood control investment is not being repaid. Power revenues now amount to about 35 million dollars per year with a net income over requirements on a cost accounting basis of over 10 million. Power is being sold as rapidly as generators come on the line and revenues will expand correspondingly.

Why, then, have we not invested capital in new federal facilities rapidly enough to take care of demands? Federal financing alone is not the complete answer, since the private and public agencies also share in the total power supply problem. But the unique character of the river development problem forces one to conclude that the federal role is the major one and the federal financing plan is the critical problem to be solved.

The program of Columbia River power development should be permitted to proceed as rapidly as the power is needed. The possibility of accomplishing this by modifying existing laws to permit independent financing of federal projects where necessary, either from the U. S. Treasury or private sources, to my mind is worth careful study. In part, the ability to finance provides its own checks and controls. Others might be instituted.

To date only about 10 per cent of the hydroelectric potential of the Columbia River and its tributaries has been developed. In order that private enterprise can make its plans for expansion, some legislative mechanism should be provided to develop the river on schedule.

In addition to the problem of financing, the administrative problems incidental to the management of integrated, co-ordinated development and operation require further careful study.

A unified and responsible management of the Columbia River development program is inevitable. As the system becomes more complex, efficient management, including advance planning as well as day-to-day operations, will become increasingly difficult under existing divided federal responsibility and authority. I have not attempted here to enter the controversy on how this should be accomplished. The formation of the Columbia Basin Inter-Agency Committee was a recognition of the problem. It has made some notable contributions to the development of co-ordinated planning, but as the complexity of the operating problems increases, some legislative correctives probably will be invoked. The proposed Columbia Valley Administration encompassed more than power development but was an effort in this direction.

Traditionally, the role of the federal government has been to undertake only those matters of public interest which local government or private enterprise is either unable or unwilling to undertake. Federal development of the Columbia River, in its main outlines, falls within this tradition.

The complexities of modern society, in combination with the economic factors within the basin, have brought about a government proprietorship for development of Columbia River power. However, this has not meant, nor do I believe it will mean, the development of federal proprietorship to the ultimate exclusion of other public or of private enterprise programs.

Certain projects on the Columbia River system are within the ability of private enterprise or local public agencies to build and can be integrated into the power grid system. Certain others are manifestly outside the interest or ability of such agencies. During the past twelve years, federal, local public, and private developments have reinforced each other to the ultimate benefit of the public interest. The creation of the federal transmission grid system has been of considerable aid to private enterprise of all sorts, including the utility business.

A better understanding of the contractual relationship problems between the government and public, as well as private power distributing agencies, is being worked out in the region and within the framework of existing law. A long-term firm power contract with the Montana Power Company is a case in point.

I should like to close with some positive affirmations about government action *and* private enterprise, in the development of river basins in general and the Columbia basin in particular. The capitalistic system flourishes under an expanding and dynamic economy. It dies under a contracting or static economy. Our system has made its greatest strides by increasing productivity per man-hour. This increase has been accomplished by mass production and the machine technique. The expansion of machine production has been built on an expandable and cheap supply of energy in the form of coal, oil, gas, or falling water.

The economy of the Pacific Northwest rests primarily upon the harnessing of an existing and abundant supply of falling water. The role of harnessing this supply of falling water for all of its uses, including electric energy, has fallen in large part to the federal government by force of circumstances primarily economic rather than political. Consequently, the economic health of the region rests to a large extent on the federal power program.

The federal role for power production purposes has been and is being shared by three agencies: the Corps of Engineers, the Bureau of Reclamation, and the Bonneville Power Administration. The responsibility for regional power supply is also shared by numerous other public and private agencies. It probably should and doubtless will continue to be so shared, but in lesser proportion to the total supply as the larger federal projects come into the picture.

These various roles present administrative conflicts—many of which have been or are being resolved. They are largely conflicts of jurisdiction, problems of home rule versus "centralized authority," conflicts between local and regional interests, and the like. As a result, important management techniques that any private business would recognize as essential to financial success are being delayed.

I belong to the school of thought that believes the government can and in many instances does operate proprietary or business functions efficiently and successfully. I believe that the Bonneville Power Administration, within the limitation of its statutory authority, is an example supporting that point of view. The fact that this administration has maintained a basic $17.50 per kilowatt year wholesale power rate throughout its twelve years of operation and is currently adding some 10 million dollars per year to its accumulated surplus of more than 53 million, despite doubling of construction and operating costs during that period, is certainly one commonly accepted test of that efficiency.

Nevertheless, I recognize the importance of "drawing the line" on such governmental activities in order to preserve as nearly as possible a truly free enterprise system. The basic problem of just where to draw the line between federal government, local government, and private utility investment responsibilities for power supply is being forged out in the Pacific Northwest. And it is being forged in a democratic manner —thus far within the framework of existing law.

Much effort has been expended by various interests within and without the region to develop changes in the existing legal framework that would resolve conflicts, preserve rights, and get results in terms of an expanding program of power production. So far, none of these efforts has resulted in significant legislation at either federal or local levels. However, there are many indications that an optimistic view of the matter is warranted.

There is a growing awareness of some of the basic problems, including those outlined in this paper. With it, there is developing a more widespread attitude of fairness on all sides. A common-sense solution, best adapted to the economic and social welfare of the region, will, in my opinion, be worked out. In the meantime, the power phases of the river development program continue to support and expand the free enterprise system of the Pacific Northwest. The power program provides a mighty arm to the nation in time of war as well as becoming the bellwether of prosperity in times of peace.

The phrase is government action *and* private enterprise, not government action *or* private enterprise. At least, that is the way I see it in the Pacific Northwest.

GOVERNMENT ACTION OR PRIVATE ENTERPRISE IN RIVER VALLEY DEVELOPMENT: AN ECONOMIST'S VIEW

By B. U. Ratchford
Duke University

Before we can decide intelligently on who should develop river valleys we must first consider the nature of the work to be done. What are the basic purposes of river valley development and what are the different activities involved?

Purposes of River Valley Development. The purposes of river valley development projects are usually stated in such broad and sweeping terms that they afford little basis for economic analysis or evaluation. They can mean much or little, depending on the way they are interpreted, but in any event they largely fall outside the scope of conventional economic analysis. For example, the Tennessee Valley Authority has referred to its "responsibility for pervasive concern about the natural resources of the valley region" and "an integrated approach to the whole complex problem of resources use."[1] Again, it has said that its task is "to help the people of the Tennesse Valley expand their control over their natural assets of waters, soil, forest, and minerals."[2]

It is probably fair to say that the major purpose of river valley development is, in a broad sense, the conservation and development of natural resources. This can mean many things to many people and few would dare oppose it as a general proposition. In economic analysis, however, it means little until we know the methods to be used in attaining this purpose and the relative importance of each method. We will turn our attention to that problem in a moment.

In addition to the major purpose, there are undoubtedly a number of secondary or subsidiary purposes which are important in undertaking the development of river valleys. First, is the purpose of using the projects as vehicles for pump-priming or its more modern counterpart, compensatory spending. There can be little doubt that the desire to find suitable public works projects in 1933 helped to win support for the TVA. While this motive may be important at particular times, it is not significant generally. The expenditures of valley projects are not easily adjusted to the need for deficit spending, and conservation policy should not be dependent on such a temporary and fluctuating guide. In particular, this consideration would not justify starting or expanding valley projects in times like these.

---

[1] *Annual Report,* 1948, p. 39.

[2] *Annual Report,* 1949, p. 1.

Another motive implicit in some arguments for valley development is that of using the expenditures to channel federal aid into low-income areas or regions. In other words, the purpose is to aid backward or underdeveloped areas. Perhaps this was the logic behind TVA's recent statement that "whether proceeds from TVA's power operations are used for bond retirement, payments into the U. S. Treasury, or retained in the power business, the net effect is to increase the Government's equity in the TVA power system."[8] This is obviously an argument which can be used only in certain cases. It is not generally valid and it tells us nothing about the characteristics or the desirability of valley development as such.

Still another purpose may be to create an electric power system which would be a yardstick to be used in measuring the efficiency and profits of private companies. For a time this was widely heralded as one of the important purposes of TVA, but apparently it has been entirely abandoned now. Whether or not it has been abandoned, the concept is not a valid one, for the TVA has not submitted itself rigorously to the conditions under which private companies must operate, especially in respect to taxes and interest. It is open to question whether any public organization which must conduct many complex operations can closely imitate a private company in carrying on one of those operations.

These secondary, subsidiary, and occasional purposes are not usually part of the nominal and professed purposes of river valley development. But in the past they have been used—and in the future they and others like them may be used—to win support for valley projects. They illustrate the wide variety of motives which may be mobilized for undertakings of this kind.

Activities of River Valley Development. We may get a better understanding of the real purpose of river valley development by considering the activities involved. The activities usually listed include flood control, irrigation, soil conservation, reforestration, and the development of water power and navigation. Most of these fall under the general heading of conservation and especially the more efficient use of water resources. The relative importance of each is usually not indicated and often the more spectacular or dramatic is emphasized without regard to its place in the order of priority. Conversely, there are other activities which do not receive the emphasis justified by their financial importance.

Obviously, the pattern of activities will vary considerably from one valley to another, but as a specific and operating example of one combination of activities, let us consider the activities of the Tennessee

---

[8] *Ibid.*, p. 55.

Valley Authority. Further, let us use gross expenses, which include depreciation charges, for the fiscal year 1949 as the measure of the relative importance of its various activities. On that basis we find that power operations represented about 57 per cent of its activities while the operation of chemical plants, mainly for producing fertilizer, was next with 26 per cent. These two activities accounted for over 83 per cent of the total. About half of the remainder (7.1 per cent) was spent for various development programs in agriculture, forestry, minerals, recreation, and the like, while navigation and flood control accounted for about 4 per cent each.[4] Thus, insofar as the TVA is a typical example, the problem largely resolves itself into the question of whether public or private enterprise is the more efficient in operating electric power plants and fertilizer factories. Together they accounted for about five-sixths of TVA's expenses for 1949.

One further aspect needs to be cleared up before the issue can be stated clearly. At present both private and public agencies are engaged in some or all of the activities which constitute river valley development. Probably most of those activities are now being carried on by specialized governmental agencies. Usually the question of river valley development is not a question of stopping any of those activities, nor of increasing the particular activities, such as soil conservation or flood control. Rather it seems to be a question of whether governmental activities shall be regrouped under a more unified control and the total increased in relation to private activity. So the question is not merely a general one of public versus private action but of a particular form of public action. That particular form might be: an authority; an interagency committee of federal agencies; or an interstate compact. Since most discussions deal with the authority, I shall limit my consideration to that form in the remainder of my discussion.

Finally, two characteristics of public action are worthy of notice. First, practically if not legally, public action in the form of an authority excludes private action in many important areas. Second, a decision in favor of more public action is in effect irreversible, regardless of the results. Time does not permit any elaboration of these statements. Respecting the latter, I need merely ask who would like to undertake the task of unscrambling TVA and putting some of its activities back into private hands?

In making an economic evaluation, our problem is to decide whether, all things considered, public or private action can make the more efficient use of the economic resources involved.

It is appropriate to consider the problem first in relation to the basic nature of our economic system. From that point of view, the burden of proof is on those who advocate more public action. Despite many exceptions, ours is still a system of private enterprise. Every relative increase of public economic activity restricts the scope of private enterprise, reduces its command over resources, and increases its burdens.

---

[4] *Ibid.*, pp. A12-A14.

The Case for More Government Action. Insofar as the situation permits, let us now try to make an economic analysis of public and private activity in the development of river valleys. There are certain phases of undertakings of this kind in which the government may have an advantage. Most of the activities in this field deal with natural resources. In several respects, our policy of exploiting and using natural resources under private ownership and management has not been the best. The ways in which we have wasted and depleted our forest and soils are good examples. There is a basic and fundamental reason for this. In the case of natural resources the production problem is quite different from that in industry. The production time-period is much longer and the whole pattern of activity is different. Price is not a reliable guide or stimulus to production. In general there is often a serious conflict between the short-term interest of private owners and the long-term interest of the nation as a whole. We have already recognized this fact in many of our conservation programs. It is difficult to be positive about the matter, but we probably had during World War II, and have now, a larger total generating capacity in our electrical system than we would have had without public action in the field. In a major emergency that is quite important, regardless of whether the public projects were economically justified at the time they were built.

A second consideration in favor of more government action is the need for a more integrated use of resources. As those resources, especially water, become scarcer, there is need for more careful planning. Also, there is frequently duplication, friction, conflict, and competition between public agencies engaged in the management of these resources. For example, there may be conflicts between different states or between different federal agencies. A river valley authority with sufficient power can reconcile many of these conflicts and produce co-ordination.

Finally, it may be possible for a public agency to open up a whole area of new benefits by a positive example. Public regulation of utility rates and services is necessarily negative in character. Because of this regulation, utilities are likely to be conservative in undertaking experiments on rates or services. The action of the TVA in lowering electric power rates dramatically showed the possibilities of building up demand with such low rates. In the long run this has redounded to the benefit of the power companies themselves and has provided much lower rates for the whole country. Yet it is doubtful that it would have been undertaken in such a bold fashion if the TVA had not shown the way.

The Case Against Public Action. The case against further public action rests largely upon various aspects of management. First, we must expect lower managerial efficiency in the case of public programs. This is true for several reasons. The men in charge are not usually selected on the basis of their business ability but on the basis of their political influence. Also, public organizations are necessarily subject to various bureaucratic controls and practices which slow up action and reduce efficiency. Someone has referred to this as "the law of progressive ossification" which is supposed to become fully developed in about ten years. Finally, river valley authorities combine under one management many diverse and complex activities. The top management of the authority must assume the responsibility for shaping policy in respect to those activities, thus substituting its judgment for the judgment of the specialized agencies which would otherwise conduct those activities. Further, it is an axiom in the field of management that the problems of management increase much faster than the size of an organization—probably as the square of the size. This means greatly increased demands upon the management of an authority.

A second objection to further public action is the danger of "empire building" on the part of public organizations. No matter how desirable a public action is, there is always the tendency to expand it further and further. In a case of this kind, where there are no adequate guides as to how far we should go, this becomes a very real danger. We can perhaps see it more clearly if we ask ourselves this question: how far would any valley authority expand if it were given all the funds it might request?

A third objection to further public action is the danger inherent in the unregulated power of an authority to set electric rates for the area it serves. Electric power today is of such fundamental importance that the structure and development of industry can be affected greatly by the rates charged for current. Therefore, a public authority which has the power to establish these rates exercises a great influence over the types of industry which will develop in that area. Mr. Lilienthal has said that in the political realm the power of the TVA would be dangerous in the hands of unscrupulous persons. In the same way the economic power would be dangerous in the hands of those who did not realize its significance or who wanted to use it to promote particular ideas or philosophies. While we have no reason to doubt the good faith of men who manage such undertakings, we may question their ability to shape the economic future of a large area.

A final danger is that public organizations may succumb to the delusion, as many of them have, that water transportation is always cheaper than other forms of transportation no matter how much it may cost a government to make it available. Insofar as I know, there has been no demonstration that inland water transportation in this country at the present time is cheaper, all things considered, than rail or road transportation. Yet cheap water transportation is usually one of the major benefits promised by advocates of river valley developments.

The Net Advantage. The above are some of the more important considerations on the two sides of the question. By their nature they are broad, general, and difficult to evaluate precisely. In such a short survey as this it is possible to do little more than enumerate them. A thorough study and economic appraisal along these lines would require months, if not years, of study by a competent staff of economists, with the assistance of specialists in various fields. So far as I can find, there has been no attempt at such a study. Practically all of the economic analysis has been done in narrow fields or has been done in an attempt to prove a case for or against public action.

It would not mean much to try to strike a balance between the broad, general considerations on the two sides of the question as stated above. It is sufficient, perhaps, to indicate that there are important considerations on both sides. In any particular case, if an economic judgment is needed on the proposal, it would be necessary to conduct an intensive study along these general lines. Such a study might well be like many which have been made of underdeveloped countries which are candidates for aid from the United States or the United Nations.

On the question of net advantage, we may refer again to the experience of the TVA as the one operating organization in the field. The TVA has stated that "private enterprise has prospered and advanced in the region. This is the ultimate justification for the activities of the Government as represented by TVA."[5] Let us see if we can measure the economic growth and development of the region.

Since most of TVA's activities are in Tennessee and since slightly more than half of that state falls in the TVA area, any pronounced effects of TVA should show up in the state figures for Tennessee. It would be better to use data for the specific area affected, but such data for areas less than states are difficult to obtain and often of questionable significance. For comparison with Tennessee I have chosen nine other southern states and the United States as a whole. The other southern states are five along the Atlantic Coast—Virginia, North and South Carolina, Georgia, and Florida—and four west of the Mississippi River—Arkansas, Louisiana, Oklahoma, and Texas. Three of these states—Virginia, North Carolina, and Georgia—are sometimes listed as "Valley States," but the proportions of their total areas included in the valley area are so small as to be of little significance to the economic life of the states as wholes.[6] The time period is, wherever possible, the twenty years from 1929 or 1930 to 1949 or 1950. The TVA was in operation during more than three-fourths of this period. The comparisons are in terms of percentage increases between the beginning and the end of the period. Since absolute amounts were usually relatively low in Tennessee at the beginning, this method magnifies the effect of any given increase in the absolute data for that state. Table 1 gives the data and percentage increases.

---

[5] *Ibid.*, p. 6.

TABLE 1

SELECTED MEASURES OF ECONOMIC GROWTH IN TENNESSEE, IN NINE OTHER SOUTHERN STATES, AND IN THE UNITED STATES, 1929–50

(Dollar Amounts in Millions, Other Amounts in Thousands)

MEASURE	YEARS	ABSOLUTE AMOUNTS			PER CENT INCREASE		
		Tenn.	9 Southern States	United States	Tenn.	9 Southern States	United States
Population	1930	2,617	23,884	122,775			
	1950	3,282	30,055	150,700	25.4	25.8	22.7
Income payments	1929	905	9,213	82,617			
	1949	2,858	29,682	197,531	215.8	222.2	139.1
Manufacturing:							
Production workers	1929	128	960	8,370			
	1947	192	1,464	11,916	50.0	52.5	42.4
Wages paid	1929	116	834	10,885			
	1947	370	2,880	30,242	219.2	245.3	177.8
Value added	1929	323	2,613	30,591			
	1947	958	7,886	74,426	196.5	201.8	143.3
Average increase, 3 Mfg. Series	....	....	....	....	155.2	166.5	121.2
Resources of all reporting banks	1929*	578	5,077	71,806			
	1949†	2,085	19,887	179,170	260.7	291.7	149.5
Retail sales	1929	633	6,505	48,330			
	1948	2,094	21,013	130,527	230.8	223.0	170.1

* June 30.

† December 31.

Sources: Bureau of the Census: *Population Census* (Preliminary Count by States for 1950); *Census of Manufacturers; Census of Business; Survey of Current Business*, August 1950; *Annual Report of the Comptroller of the Currency.*

Between 1930 and 1950, the population of Tennessee increased by

---

[6] The percentages are: North Carolina, 11.2; Virginia, 8.4; and Georgia, 2.7. Herman Finer, *The TVA Lesson for International Application*, p. 1 n.

25.4 per cent. In the other nine southern states, the increase was 25.8 per cent, and in the United States, 22.7 per cent. There was no significant difference here. This means, among other things, that the other comparisons would be about the same whether they are on a gross or a per capita basis.

Income payments had the following increases between 1929 and 1949: Tennessee, 216 per cent; nine other southern states, 222 per cent; and the United States, 139 per cent. To measure the increase in manufacturing between 1929 and 1947, I have used a composite of three series from the *Census of Manufacturers*—the number of production workers, wages paid, and the value added by manufacture. The increases were: Tennessee, 155 per cent; other southern states, 166 per cent; and the United States, 121 per cent. These data do not include figures for the Oak Ridge Project. If those are included, Tennessee has a little larger increase (58.2 per cent) than the other southern states and about the same increase (248.1 per cent) in wages paid. Naturally, no data are available for value added at Oak Ridge; so no composite figure for manufacturing can be computed. Between 1929 and 1949, total resources of all reporting banks showed an increase of 261 per cent in Tennessee, 292 per cent in the other southern states, and 149 per cent in the United States. In retail sales, between 1929 and 1948, Tennessee had an increase of 231 per cent, other southern states, 223 per cent, and the United States, 170 per cent.

The behavior of all these series shows a striking similarity. In each case except retail sales Tennessee had a much larger increase than the United States as a whole but a slightly smaller increase than the nine other southern states. The uniformity with which this pattern appears lends added significance to the comparison. The only other exception to this pattern in the series of data which came to my attention occurred in the data for receipts from farm marketing, which is a subdivision of income payments. In that series, Tennessee showed a slightly larger increase than the other southern states between 1929 and 1949. The difference was about 5 per cent.

If we give equal weight to each of the five major series and compute an average, we get an index number (1929-30 = 100) of 278 for Tennessee, 286 for the other southern states, and 221 for the United States. There is nothing in these figures to indicate that the TVA has been a major factor in affecting the economic activity of the state in which most of its activities have been centered. Over the past twenty years the South as a region has, in nearly all lines of economic activity, made substantially larger gains than the rest of the country. Tennessee has gone along fairly well with that trend, being ahead of some states and behind others.

DISCUSSION

Joseph S. Ransmeier: These comments fall naturally into three parts: first, some preliminary remarks upon the general problem under discussion; second, some observations with respect to a series of points raised by one or more of the principal papers; and third, a brief examination of Professor Ratchford's analysis of the economic impact of TVA upon the Tennessee Valley area.

It is clear that the problem of river valley development is eminently and inevitably a problem of "political" economy. Because of this political aspect, it is natural that individual attitudes toward the questions involved should vary widely. If we are to have any prospect of pushing forward our common understanding, it is essential that we define precisely our objectives and the means that we are considering for achieving them. With Professor Ratchford, I think it is well at the outset to put to the side valley development as an employment and income stabilization device. If such were the purpose, then, in general, other public spending programs would give greater promise of eliciting the desired result. Rather, I would suggest that river development is (or at least should be) one phase of a public conservation policy aimed at preserving and expanding the productive resources of the economy at large. I believe that the speakers would generally agree with this proposition (though, no doubt, all would also recognize the difficulty of giving either theoretical or practical content to the concept of ideal conservation policy). As for the means of government (as well as perhaps private) action in river valley development, no single simple formulation is possible. Any discussion must proceed on the basis of certain assumptions, best made explicit, as to such questions as the level of government which would carry out the development, the kind of administrative organization that would be employed, and the scope of constitutional powers available to back up proposed public action.

A resolution of the policy issue of desirable government action in river valley development is not to be found in terms of easy generalities. Rather, it must be sought in the light of the economic character (and perhaps social environment) of the particular valley involved, the past and prospective future performance of private interests in marshaling the valley's resources, the possible availability of indirect approaches by which governmental influence might also be exerted to foster more effective resource utilization, and the nature of the particular program of direct government action under consideration. More than this, as Mr. Horner has emphasized, there must be a continuing awareness of the eternal economic problem of limited resources available for application to an endless number of alternative possible uses. Dr. Raver has said that the issue should not be drawn in black and white as between governmental or private river valley development. I would add that the indicated kind and degree of governmental and private participation should vary as among different valleys depending upon the particular circumstances of each case.

Let us turn now to some more specific observations.

I agree with Mr. Horner that the recent and continuing rate of public investment in water resource improvements—with the steady accompanying increase in installed capacity of public power plants—is a significant economic phenomenon which warrants careful planning and analysis. There is no economic justification—and I suspect no other justification—for present diversity of practice in appraising project feasibility. The recommendations of the Cooke Commission looking to uniformity of procedure for project analysis among the several federal agencies interested in water resources are of urgent importance. If adopted, they should greatly facilitate the review of agency requests for funds by the Bureau of Budget and the Congress. I wonder if they would not make unnecessary the proposed superboard of review—unless that board should have greater long-term planning responsibility than has been indicated.

It seems to me that on the question of the cost-benefit criterion, Mr. Horner is caught in a dilemma. As an engineer he seeks in this criterion an objective measure of economic justification. Yet he is reluctant to include in benefit summations consideration of such factors as recreational advantages or benefits to wildlife although in some cases these advantages, on a level of federal significance, have proved to be very real. It may be that Mr. Horner's hesitance is explained by the uncertainty of these benefits. But I wonder whether it does not really spring from his unconscious adherence to the proposition of the Cooke Commission from which he believes he dissents; namely, that however useful benefit-cost ratios may be as preliminary guides to public action, final decisions must be made in the light of total social policy.

The principal papers agree that government action should be undertaken only when private action will not do an adequate job of river valley development and that where government action is taken, it should be at the lowest level feasible. This seems sound policy in a society which seeks to minimize economic and political concentrations of power. There remains, of course, great room for difference of opinion as to what constitutes an "adequate job" by private interests or lower government levels rendering unnecessary federal action.

Where it is agreed that some federal initiative is required, there may yet be advantages in co-operative action with lower levels of government or with private interests. No doubt such co-operative programs can be evolved by men of good will, whatever the type of federal organization; but administratively, the regional valley agency, decentralized from Washington, would seem well-suited to such combined action programs. Thus, it affords greater ease of contact between the various management interests involved, reduces the number of representatives of the federal interest, and, to the extent that the lines of administration between agency management and field operations are shorter, tends to permit greater flexibility of operations. So long as federal agencies are dependent upon Congressional appropriations, effective budgetary review should provide necessary safeguards against the "empire building" that Professor Ratchford fears, whatever the administrative organization employed. However, if there be any substantial danger of empire building, then I suspect that the check of local jealousy of federal power operates more effectively to limit the sphere of action of a regionalized federal agency than it does in the case of an agency with administrative headquarters in Washington.

However ill-advised many improvements for inland navigation have been, I am not prepared to concede that this purpose can never be economical. The fact is that many channels that have been built have not been good ones, and that little has been done to promote water shipping beyond bare channel provision. The new Tennessee River channel is an excellent navigable waterway whose use is being promoted by a well-rounded navigation program. The record of shipping here will provide a useful case study. Since initiation of the new channel, ton-mile traffic has increased fourteen-fold; hauls on the river are longer today than ever before and of higher value products. Nor is the end of the expansion in sight. The railroads have, understandably perhaps, been slow to sit down and work out joint rates; and the co-ordination of physical facilities with the railroads and with water carriers operating upon interconnected channels can yet be improved. I do not hold myself out as an enthusiast for accelerated development of river channels for inland navigation. Surely the case for tolls must be reconsidered, as must also be the impact of proposed new facilities upon existing carriers. I do, however, venture the thought that experience on the Tennessee should be valuable in helping us arrive at an intelligent modern policy in this historic area of public action.

Dr. Raver has given a very useful indication of the technical economy of a regional water power system. An isolated plant which would be uneconomical by itself, when tied into a transmission grid and operated as an integral part of a power system may become a highly economical undertaking. (This may be true whether the plant be steam or hydro, and constitutes a strong economic ground for authorizing government hydro agencies to construct steam electric plants.) The same advantages of integration also exist as to systems of flood control and inland navigation.

I regret that none of the papers brought out the very significant development at TVA of genuine multiple-purpose operation of dams and reservoirs. The possibility of superimposing flood storage on top of a reservoir operated for power purposes had been previously recognized (and, indeed, was the principle upon which the Boulder Canyon project was planned), but it was the distinctive contribution of TVA to work out the principle of rule-curve reservoir operation. This principle requires the availability at the start of the flood season of empty storage capacity in prescribed amounts at each project. While filling is, of course, contemplated in the event of floods, in their absence the rule-curve schedule specifies the amount of capacity that must be kept available during successive weeks throughout the flood season in order that adequate storage may be on hand to control a statistically estimated project flood (of substantially greater volume than the maximum flood of record). At the close of the flood season but prior to the low flows of late summer and fall, substantial filling of the reservoirs is permitted in order to maintain a maximum supply of firm power during a possible long dry season. Such operation is genuinely multiple purpose. It should have potentiality of far-reaching application where some flood storage is indicated to be economical and where an adequate record of the seasonality of great floods appears.

Mr. Horner's appeal for the principle of self-liquidation is persuasive. Unfortunately, in the case of a genuine multiple-purpose development, it runs squarely into the problem of allocation of joint costs. To say that, from a public business standpoint and omitting other considerations of public policy, direct beneficiaries should bear at least the separable costs of advantages conferred upon them is one thing. But to define self-liquidation to include the meeting of charges on account of allocations of genuinely joint costs is entirely different. After studying the problem in the case of the TVA dams, I have strong doubts as to the practical feasibility of working out a meaningful use-of-capacity technique applicable to a case in which common capacity is genuinely operated for multiple purposes. But even if feasible, any such mechanical approach—independent of the economic categories of costs and values—is certainly arbitrary in the extreme and could easily have the result of making apparently uneconomical a project whose several benefits more than cover their separable costs and collectively more than cover all joint costs in addition. It is time that the use-of-facilities method of allocation were reverently but firmly laid to rest.

What, then, should be the basis of rate making for vendible benefits of multiple-purpose projects? I can only suggest that normally charges should recoup separable costs and a portion of joint costs to be determined according to that very unsatisfactory criterion, public policy. Certainly such policy should have regard for the reasonable revenue requirements of neighboring privately-owned utility systems whose level of charges cannot but be affected by the public rate schedules. If this seems to place excessive power in the public agency, as Professor Ratchford believes it does, I would answer that such power rests better in an agency of government than in a monopolistic privately-owned enterprise.

Where electrical energy is generated as an incident to governmental water resource development, there is much room for debate as to how such power should be marketed. Perhaps some analogy to the developing doctrine of effective competition might be applied here. Where adjacent privately-owned power companies have a long and reliable record of working efficiently to bring expanding service to ever increasing numbers of customers at steadily decreasing rates, surely then the case for public distribution is not so strong as if such companies have long followed negative policies, content with existing profitable situations. Unfortunately, the all too frequent ineffectiveness of commission regulation and the general absence of competitive pressures have resulted too often in negative policies, though one detects some improvement in performance of the power industry in recent years.

A major issue rests in the question as to whether a single valley administration should have action responsibility for the comprehensive development of all federal conservation policies within the valley, including policy with respect to both land and water resources. Herein, of course, lies the uniqueness of TVA. Certainly Dr. Raver's discussion has underlined the importance of unified basin planning as to water resource development. On the other hand, there may be less need for combining federal land and water conservation activity in a single action agency for the entire region. The matter deserves consideration; and the record of TVA should be highly relevant.

Finally, let us look for a moment at Professor Ratchford's analysis of the impact of TVA upon the Tennessee Valley area. He suggests that since the bulk of TVA expenditures is for its power and fertilizer programs, justification for the Authority is contingent upon its superior efficiency in these activities as compared with private industry. Whatever an analysis of such relative efficiency might show, it seems to me that this deduction is open to question upon two grounds. First, to the very substantial extent that TVA influences resource conservation by inducing action by state and local agencies, its total program is not reflected in its own budget figures. For example, TVA has induced the valley states vastly to improve the effectiveness of their protection of timber lands against forest fires, but its own current budget gives relatively little weight to this important activity. Second, in the case of the fertilizer and power programs, the issue is surely not so narrow as simply the efficiency of production but goes further to include the manner of application in the regional economy of the things produced.

In the TVA area itself the sale of power at wholesale by TVA and at retail by municipal and co-operative distributing organizations has been accomplished with apparent profit on both levels at low rates and with accompanying greatly increased consumption. But of perhaps equal significance with the record of the public power system has been the experience of adjacent privately-owned companies. These companies, their rates subjected to powerful downward pressure by those of the public system, have made major rate reductions. Rather than impairing earnings, these reductions—combined with effective promotional activity—have brought about vastly increased consumption and steadily increasing net returns. Thus, in 1949, the net income of the Alabama Power Company, after interest and taxes, was $8,800,000, or 11.1 per cent on stockholders' equity, as compared with $3,300,000, or 3.6 per cent in 1933. (For the Georgia Power Company, the increase was from $5,100,000, or 3.7 per cent on stockholders' equity, in 1933 to $10,600,000, or 9.4 per cent, in 1949.) This increase occurred despite very substantial increases in taxes and a change in depreciation accounting bringing much higher depreciation charges. Where public operation is responsible operation, therefore, there is no incompatibility with continued profitable private enterprise in the power industry in neighboring areas.

Professor Ratchford has attempted a statistical analysis of the economic impact of TVA by comparing progress in Tennessee since 1929 with that in nine other southern states. Very respectfully, I must dissent from this analysis. Taking account of the fact that TVA has test demonstration farms in perhaps half of the states of the Union—though more heavily concentrated in the South than elsewhere—and that it provides the power requirements of a population living over an area of 80,000 square miles (as compared with about 40,000 square miles in the Tennessee drainage basin proper) and has influenced rates over a yet wider area, I would suggest that the three states of Alabama, Mississippi, and Tennessee are more fairly reflective of the

"TVA region" than would be Tennessee alone. Further, this spreading out of TVA activity, plus TVA's work with agencies charged with resource use and development in all of the Valley states, including Virginia, North Carolina and Georgia—with inevitable influence within the latter outside of the drainage basin—leads me to exclude them from any comparison in which they would otherwise be treated as outside of the TVA region. Finally, I see no sufficient similarity to the TVA region in terms of resources or resource development problems in Florida, Texas, and Oklahoma to warrant their inclusion in a comparison seeking to throw light upon the effects of TVA operations. Accordingly, of Professor Ratchford's nine states we are left with Arkansas, Louisiana, and South Carolina as perhaps reasonably comparable to the three TVA states of Tennessee, Alabama, and Mississippi, but more or less (though by no means entirely) outside the TVA area of influence.

I have not had time to rework all of the indexes prepared by Professor Ratchford to apply them to these two trios of states. I have, however, prepared a few comparable indexes, and the results are interesting. I find that in terms of income payments to individuals, using 1929 as a base, the three TVA states reached an index of 292 in 1947 as compared with 276 for the non-TVA group. Shifting to 1933 as a base, the three TVA states reached an income payment index in 1947 of 552 as compared with 478 for the non-TVA trio. Also with 1933 as a base, an index of number of establishments for the TVA states reached 236 in 1947 as compared with 209 for the non-TVA group; an index of number of production workers reached 216 for the TVA group as compared with 183 for the non-TVA group; and an index of value added by manufacture reached 663 for the TVA group as compared with 620 for the non-TVA trio. Only when these latter indexes were placed upon a base of 1929 (though it must be recalled TVA was not initiated until 1933) did two of them reveal a greater advance for the non-TVA states than for the TVA group.

All of this may seem to be a quibble, but it is not so intended. If TVA's co-ordinated program has not had a definite stimulative effect in expanding economic opportunity in the Valley, it would certainly raise a serious query as to the effectiveness of a single regional federal agency engaging in a unified program to sponsor development not only of water but also of land resources of the area in charge. It is true that some of the gains from revised agricultural and silvicultural practices may not be reflected in immediate income statistics. And one must grant with Dr. Raver that at TVA, as in the Columbia basin, emergency conditions have pushed, and kept, the power objective to the fore; so that the full gains to be achieved from prosecuting other purposes have not been realized. As Frank and Nebboy have recently shown in the *Yale Review* (Autumn, 1950, p. 43 ff.), TVA has a great deal of its program of land use adjustment still ahead of it. Nevertheless, the revised indexes presented herein are at least consistent with the thesis that the Authority has had a substantial stimulative effect upon economic activity in the Valley region.

DEAN RUSSELL: In 1932, the federal government was producing less than one-half of one per cent of all electricity generated in the United States. In

1949 this had increased to more than 13 per cent. And it is estimated that federal projects will account for at least 25 per cent of the new production capacity to be constructed in the United States during the next three years.

The implications for the future are far more serious than shown by the actual figures of this trend toward government ownership of the means of producing electricity. Here is the reason: When even one government electricity project is built, the result is that private capital for the building and expanding of private power companies in nearby areas tends to become increasingly scarce. Many persons with money to invest are beginning to realize that once the government enters into any area on even a small scale, it will sooner or later control the entire area. So it was in the Tennessee Valley. So it is in the Pacific Northwest. And there is no evidence to indicate a different result in any other section of the country that contains a government electricity plant, regardless of the excuse used by government to build the initial project.

This evil of government ownership feeds upon itself. Once it starts, there seems no way to confine it to a given area, or even to a given function. The private power companies that are permitted to operate within the area of a government hydroelectric project are soon forced to depend upon government for their own supplies of electricity. This situation should now be obvious to all persons in the Pacific Northwest. This same procedure is becoming increasingly obvious in other areas where these grandiose hydroelectric projects have been built by government through its programs for developing the river valleys of the United States.

The supporters of these various hydroelectric projects often advance the argument that they would never be built unless government built them; that the various river valleys would remain "undeveloped" unless government developed them; that all this water would continue to be "wasted" unless government utilized it. Perhaps so. It is also true that a free people have never voluntarily undertaken to transport to the tropics all the ice that is "going to waste" around the North Pole. And the reason is simple: A free people do not knowingly support uneconomic expenditures of effort and capital. They will not voluntarily invest their savings in a project where they anticipate that the cost will be greater than the return and where there is no apparent economic demand for the product.

Next, the advocates of government ownership will present the facts and the figures to show that government electricity projects have brought prosperity to the various river valleys where they are located. It is true that the people in Tennessee now have more actual dollars than they had before the advent of TVA. But is this not due in large part to the inflationary schemes of government and in part to the specific fact that hundreds of millions of dollars were taken in taxes from the people elsewhere and poured into the Tennessee Valley? The cost of TVA, the Oak Ridge atomic project, and the various other government projects in Tennessee probably runs into the billions of dollars. Any person could create some "prosperity" wherever he wished if he had that amount of money at his disposal. But in any case, the government cannot create prosperity in Tennessee except at the expense of the prosperity of the taxpayers in other regions who had that much less money to spend on their own welfare and on the private development of their own resources because some of their money was taken from them and spent in the Tennessee Valley.

Next the advocates of these river valley programs will argue that if people in Tennessee or the Pacific Northwest have more money to spend, this in turn will mean that the spending of this money will create additional prosperity in other sections of the country. This is like saying that a huge national expenditure of tax funds to level all the mountains would create prosperity everywhere on the theory that the mountaineers would then have more flat land for farming, and thus would soon have more money to spend in this campaign of creating universal prosperity by universal spoliation.

When all other arguments fail, the advocates of government ownership do not hesitate to advance the idea of national defense and to play upon a person's love for his country. For example, the Tennessee Valley Authority is generally given credit for supplying the electricity that made the atomic bomb. Yet the truth of the matter is that the Oak Ridge atomic project contained its own steam generating plant when it was first built. Oak Ridge was not designed to be dependent upon TVA for its electricity. The fact that Oak Ridge saves on its fuel costs by using large quantities of TVA "dump power" during the seasonal peak TVA production period has no bearing whatever on this fact. There have been times when Oak Ridge has supplied electricity to TVA.

It is true that the United States has not lost a war to date. But this has not been due to government ownership of the means of production. On the contrary, our strength has been in the fact that we have had less government ownership and fewer government controls than have our enemies. In America, free people—operating in a competitive market over a period of time—have built huge industries for the production of automobiles, nylon hosiery, and aluminum pots and pans for a profit. And the necessary electrical capacity to operate these plants has appeared when and where needed. This capacity will continue to be available if the people are left free to build the plants with their own money at no expense to the taxpayers. This procedure automatically insures adequate reserve capacities for the building of tanks, uniforms, guns, and airplanes when the need arises.

Finally, what will it profit us even to attempt to stop the world-wide spread of communism—"government ownership of the agents of production"—if in the process we adopt the selfsame economic principle that we claim to be fighting against? Freedom will eventually cease to exist in any nation that adopts this principle, for the fundamental freedom upon which all other freedoms are based is the economic right of an individual to work, trade, spend, save, and invest as he himself decides is best. The only possible way that this freedom can be expressed is through the voluntary processes of the market economy, leaving each individual responsible for the choice he makes.[1]

---

[1] An extension of these remarks, under the title, "Ownership in Common," has been published by the Foundation for Economic Education.

ECONOMIC PROGRESS: GENERAL CONSIDERATIONS

SELECTIVE CULTURE CHANGE

By SOL TAX
University of Chicago

I suppose that the phrase "economic progress" in this symposium refers simply to improvement of material well-being, health, and the like, as seen through the eyes of our European and American tradition. From this point of view it is easy to say that we are advanced and other people and places are backward. Most anthropologists, trained to take a broader view, reject this notion of progress as ethnocentric, which it is. It assumes that our own values are or ought to be universal and that the practices of other peoples should be changed accordingly. This general view once accompanied the little-brown-brother variety of imperialism which has so dramatically defeated itself. We are now anxious to respect the cultural independence of other peoples while we help them to material betterment. This means embarking upon a program of carefully selective culture change. It is the purpose of my paper to ask whether this is a possible program. The answer to which I shall come is easy to state at the beginning: What we have learned about culture change tells us that such a program is, while certainly difficult, theoretically feasible. But in practice we are almost certain to fail, basically because too few of us are free enough of an ethnocentric view of the world to be able to administer the program.

My first proposition, that it ought to be possible—theoretically—to bring about selective culture change, will be easily accepted once the terms are made clear.

The term culture was defined by Edward B. Tylor[1] as "that complex whole which includes knowledge, belief, art, morals, law, custom, and any other capabilities and habits acquired by man as a member of society." The recognition and isolation of culture as a separate object of study has distinguished and characterized anthropology ever since. Culture is our central concept. We devote our efforts to the history of human culture and the processes of cultural growth and decay; to the nature of the interrelations of parts of culture and of cultures as wholes; and lately to the interrelations of culture and the personalities of men.

---

[1] *Primitive Culture* (1871), p. 1.

By drawing together the materials of archaeology and linguistics, of folklore and physical anthropology, of ethnography and geography and history and psychology, it has been possible to trace with some confidence the development of technology, religion, marriage, mythology, the state, and other institutions and aspects of culture. Painstakingly the assumptions of the nineteenth century pioneers have been tested and our historical understanding revised. The relatively simple picture of social evolution propounded by men like Lewis H. Morgan has become infinitely complicated by newer data and second thoughts. We no longer speak glibly of progress, for example. The human store of knowledge is generally increasing and at an accelerating speed; it is quite easy, therefore, to speak of progress in technology, or in science, or in similar elements where accumulation is a factor. One can also speak of progress from smaller to larger social units, for example, provided we recognize the arbitrariness of the measurements involved and do not too heavily evaluate "progress." But for most aspects of culture, not at all cumulative or measurable on a scale, the word progress has no meaning whatever.[3] As Robert Frost has observed: "Whatever progress may be taken to mean, it can't mean making the world any easier a place in which to save your soul." (Quoted in *Time,* 1950.)

Our picture of the way culture develops is, however, no less clear because it is complicated. Mainly, we know three essential things: first, that although culture grows in response to human needs—physiological, psychological, and social—it becomes elaborated far beyond such needs. If nature has a law of parsimony, culture clearly follows a law of exuberance. Therefore, on the base of a common human nature, cultures come to differ in extraordinary, even fantastic, degree. The second main thing we know is that no people invents more than the tiniest fraction of the cultural heritage it calls its own; borrowing or the pooling of cultural items through processes of continual diffusion of new items is a major law of cultural growth. That is why cultures can become so elaborate—people are such copycats. Third, we know that any particular culture gets set in its ways, and while it borrows from others, it reinterprets everything borrowed to suit its own peculiar taste. (A classic popular statement is Ruth Benedict's *Patterns of Culture.*) That is why, although we are such copycats, the elaborations of culture are so variegated. It sometimes seems as though anything is possible and it has already been done. As in a kaleidoscope, the patterns appear again and again in different combinations; the difference is that once a pattern of culture has become set, further changes are no longer random but determined in large part by the pattern. The pattern or the twist or bias of the culture thus becomes a principle of selection.

---

[3] A. L. Kroeber (*Anthropology,* 1948, pp. 296–304) suggests possible meanings in "the atrophy of magic based on psychopathology" and "the decline of infantile obsession with the outstanding physiological events of human life" (p. 304), measures which are suggested by history and by the values of our culture. With Kroeber's position I fully agree.

In a state of nature, so to speak, it can therefore be said that all culture change is selective. If one is consciously directing culture change (or simply trying to get along), he must obviously take account of the initial bias of the culture. However, this is not the sense in which I am using the phrase "selective culture change." The problem of selection in democratically planned culture change is to respect the general cultural bias and the institutions and beliefs held dear by a community of people, at the same time that their level of living is raised and they are given both new wants and the means to attain them. The economically backward population is to get the benefits of our technology and science, our chemistry and bacteriology without important damage to their values and their traditional way of life.

The reason this is a difficult program is that in general a culture is a functional system of interdependent parts; it is more or less in equilibrium. A change in one part tends to effect changes in all the rest. To introduce an important change in the economy is therefore likely to begin a chain of reactions that may well end in disorganization and death. As a result of contact with European society many cultures have been utterly destroyed, and populations deprived of their way of life have been wiped out. People can be very stubborn. We are familiar with the analogy that just as reptiles once became too specialized to survive, so we in cities are so dependent upon our technology that when something deprives us of that cushion between us and nature, we must perish. But we are less aware of the fact that peoples also perish because they simply will not live in a world that is unfamiliar or, perhaps, unpleasant.

So a program to change a culture selectively presents serious difficulties. But it is clearly possible. We know it is possible, first of all, because it has been done. The success of the Incas in incorporating alien cultures into a thousand-mile mountain empire without destroying them is one case in point; another is the success more than once of the Japanese in changing substantial parts of the national culture. But the best evidence that selective culture change is possible is that it is a normal occurrence in nature, and the process is no secret. When we bring milk bottles to the Hottentots (milk they have had from time immemorial) it is true that we may be breaking into a closed system of equilibrium. But it is also true that the Hottentots once took the cattle complex into their culture; and this too must have upset the equilibrium. Indeed, every people has adopted culture traits; every culture still extant has clearly survived innumerable shocks to it. Therefore the problem is to see that the damage done when a Point Four administration initiates the changes is not much greater than when it happens in other ways.

The question becomes one, then, of practical means to an end. Before discussing this question I want to suggest that it is not knowledge of the theory of culture change or new principles of acculturation that are lacking. The very general statement that I have made here—and which can be found in any good textbook (for example, Melville Herskovits, *Man and His Works,* 1949)—can of course be elaborated indefinitely. It can also be reduced to propositions on a social-psychological level, where statements about reinterpretation of cultural elements become problems of misunderstanding in the communications between men. Such elaborations and reductions should and will continue. They will create excitement in our scientific journals during the next century, after which our propositions will be slightly more comprehensive and exact than they are today. But even today our knowledge goes far beyond the minimum need in the case.

What is needed is not more general knowledge but rather some clinical experience. Suppose somebody seeks the advice of an anthropologist on our famous program for the Hottentots. The anthropologist will know from the literature enough about Hottentot culture to prescribe in a general way. But if he is wise, he will want to look at the patient as of the moment. He will want to know more than the formal social structure and the values and practices characteristic of Hottentot culture. He will want to know the Hottentots. He will want to know the leading families and why they happen to be the leading ones. He will want to understand the current issues and personalities in Hottentot politics. He will want to know what they think of anthropologists and of Point Four bureaucrats. He will, in short, want to visit the Hottentots. But as soon as he talks to his first Hottentot, it will occur to him and to the Hottentots alike that he is not an inert observer of an inert mass. He is part of the situation being affected and will be part of the program whether he wills it or not. Everything he says and does is either in the right direction or the wrong direction. He is meddling with the patient. The sad fact is, however, that our hypothetical anthropologist is probably on his very first case. He is learning by doing, getting his first clinical experience. This is because almost none of us has had this experience. We have had some opportunities in our Indian service and in programs in Latin America and in the wartime Japanese relocation project. But they have been few.

The experience of colonial administrators and the anthropologists who have served under them is almost useless because they have been trained to manipulate the culture but not to get the people to participate democratically in the important decisions. The latter is both the critical and the difficult part.

It may well be asked why an anthropologist without clinical experience is better than an administrator or a public relations man or a politician who is used to dealing with people and situations. Clever salesmen artfully enough suit their technique to different circumstances. Perhaps if they are sufficiently briefed in the peculiarities of the culture to be changed, they can do the job.

Needless to say, it is not a degree in anthropology that is needed as a license to practice. But training in anthropology is a necessary ingredient. What is required is the detachment from our own culture that comes with studying many others. It may very well be that training is not as important as the selection of persons who embark upon careers in anthropology. Or it may be the informal indoctrination by fellow graduate students that either transforms the student's point of view or else drives him into another field. Whatever the mechanism, anthropology tends to produce a scholar with the power both to understand and to respect another man's culture—not as he respects another man's opinion but as he respects the deepest characters of another man's personality. This is essential because only through such respect can the long-time confidence of most people be won by a stranger. Without this confidence the difficult operations are foredoomed to failure.

That is not all, however. Anthropologists by training or selection reach for the common people of another society. Just as an economist reaches for a price index, so a field ethnologist gravitates to the lowly hut. We want to see the society from the ground up and the functionaries in perspective. In fact, we have an occupational distrust[8] of officials, as we do of managers or missionaries; and we apologize profusely for quoting information from a source that a journalist calls unimpeachable. This keeps us from making perhaps the most common and the most fatal colonial mistake—that of working through established leaders who are presumed to understand how the people feel about things and who of course also know what is best for them.

But perhaps most essential is the substantive knowledge of cultural variations. Considering that most of his training involves discussion of the variety of cultures, it is not surprising that a good ethnologist will within a few hours catch on to enough of the culture so that he does not misbehave; that he will quickly get enough feeling for the essential biases of the culture to enable him to ride with rather than against them; and that he can quickly enough come to take the alien culture so for granted that he can begin a co-operative planning operation in its own terms before his participation in the situation hardens in such a way as to destroy any chance of success. Timing is important.

---

[8] In the sense not of impugning their motives but of doubting their knowledge.

Perhaps I should make clear that anthropologists also have limitations. We are used to working personally in small communities. Do not expect us to sample properly or to read statistical tables. Our forte is interpersonal relations, not documents. But I think that the vices of our profession do not limit us to villages or small tribal societies. In India no less than among the Navaho one faces an alien culture—as well as many constituent cultures—with all of the attendant problems. It is a fact that though there may be a hundred million bearers of a culture, each of them when he is met must be met on the same terms as if there are but a hundred. It is also patent that the problem of working through supposed leaders is intensified in a large society. In most places where Point Four programs will go into effect they will fail because we shall have perforce to use national leaders to put the program into effect, without even noticing that such leaders are almost as far removed from the population as we are ourselves. And finally, of course, the problem of dealing with cultures is greater rather than less when there is a complex of hundreds of them rather than only one.

Obviously there are not nearly enough anthropologists to go around. We need more, and we need to give more of them the clinical experience required to work out with people improvements in their way of life. But clearly we shall have to settle for very much less. Everybody connected with a Point Four program, from the top policy makers to the second secretaries, ought to get a minimum briefing in the problems posed by cultural differences, as well as in the culture of the area to which he is sent. But however much we do along these lines seems so little that I am afraid the case is hopeless. I am afraid that we shall blunder into other societies and misbehave blissfully on the assumption that our ways must also be their ways, that these undeveloped people must want what is good for them, and will surely be grateful to us for supplying it. And our first fatal assumption may well be that economic progress is an absolute good.

SOCIAL STRUCTURE AND ECONOMIC PROGRESS: GENERAL PROPOSITIONS AND SOME FRENCH EXAMPLES

By JOHN E. SAWYER
Harvard University

It has long been customary for the opening chapter of economics textbooks and the opening lecture of elementary courses to make a formal bow to the importance of "noneconomic" factors. This ritual has tended, however, to have about the same relation to what follows thereafter as the opening prayer of a national political convention has to the subsequent activities on the convention floor.

For more than a century the primary focus and the very great achievements of economics have centered about an increasingly sophisticated analysis of relationships held to be "internal" to economics. While the wisest observers of economic behavior have been deeply aware of the social context, the major effort of the science has tended to remain within certain assumptions of the late Enlightenment from which it sprang, as to the relation of economic processes to the more general frame of social action. These powerful simplifications and the techniques they have facilitated have greatly contributed to the successes of economics in developing a "new mechanics" of prices and costs, allocation and distribution. They have, however, limited the kinds of questions that economics has either asked or been able to answer.

The massive social upheavals of the last twenty years have forced to the fore new questions not answerable within these traditional restrictive assumptions. Wars, depression, and the extraordinary ventures in which the United States has engaged (such as the European Recovery Program, Point Four, and the like) have made it increasingly evident to economists and statesmen alike that the institutional context cannot be taken as constant or assumed away and that economic activity and economic progress are not simply a function of tools and resources, capital and markets. The big questions of the day concerning economic growth and development cannot be answered without increasing attention to what have been considered noneconomic categories or without recognizing the extent to which economic activities, while powerfully molding the social forms and class relationships of a society, are themselves a function of the total social structure.

In gross terms, of course, the importance of the wider institutional context has long been accepted. Marx and others have emphasized the basic institutional conditions of capitalist development—transferability of property, mobility of resources, free labor, a rational-legal political frame, and the like. But less generally appreciated have been the ways in which the formal and informal social structure persistently shapes the behavior for all economic actors.

In this paper I want to do two things: First, to suggest a way of approaching these questions, indicating some of the sorts of problems that need to be examined; second, to illustrate the kind of influences at work, using examples from within that fraction of the globe that has shared the basic institutional developments of modern capitalism, notably the French example.[1]

I

Forced back into sociocultural categories we rapidly discover how little we know of them, of the mechanisms through which they operate, or of how to incorporate such categories of explanation into the systematic analysis of economic processes. We do not yet have the social theory or understanding of the human personality adequate to demonstrate precise interrelationships among all these variables. The newer social sciences, however, offer useful concepts and ways of getting considerably closer to the processes by which patterns of motivation and behavior are shaped.

One of the most useful of these approaches—so-called "functional-structural" analysis, as developed in contemporary sociology—focuses attention on the extent to which social action tends to be "structured," both as to ends and means. Any society necessarily institutionalizes particular goals and values, patterns of social relationship, and ways of doing things requisite to the continued operation of that social system; in sociological language, it prescribes patterns of normative conduct in a system of structured roles. Where these patterns of working and living, acting and reacting, seeking and believing become so widely accepted as "legitimate" that conformity with them is generally expected and is supported by moral sanctions, they can be called the "institutions" of that society. In any going society these institutions are highly interdependent. The patterns of family relationships or of social rankings or ultimate values, for example, necessarily bear in upon patterns of economic activity.

From birth the human individual is molded toward conformity with these institutions through the process of socialization. Family, neighborhood, school, and all the rest bring him in substantial measure to internalize those goals and relationships, those ways of feeling and behaving that make up the bulk of the informal social structure; and a variety of sanctions, ranging from police action to the most subtle forms of social pressure, continuously urge conformity to established ways. It is in terms of his particular social structure—its institutionalized rankings and values and patterns of conduct—that the individual normally seeks approval, recognition, and reward.

---

[1] At the request of the editor I have omitted here a range of references to people and sources given in two closely related and more extended papers noted below.

The economic actor, then, must be seen as oriented to a comprehensive institutional system in relation to which he acts and aspires. Only in reference to this total social situation can the utilities and disutilities involved in any specific decision or course of action be meaningfully calculated. Insofar as action is to be analyzed in terms of rational choices among alternatives, the concept must, as a first requirement, be broad enough to embrace the full range of social rewards and penalties, the sum of satisfactions in relation to this total social situation; and, at a more complicated level, it must eventually be radically deepened to comprehend the working out of compulsive behavior through institutionalized channels.

It is evident that different institutional systems will be more or less encouraging or discouraging to particular patterns of economic activity. A community whose systems of beliefs and statuses, for example, give high reward and recognition to worldly achievement will get more in the way of economic enterprise than one otherwise oriented. This approach, while clearly not offering quantitative solutions, provides some sort of frame for comparative analysis of the ways in which given social structures are differentially favorable to the kind of economic development with which we are here concerned.

II

A wide range of comparative studies will be needed in the effort to bring any precision to the effect of social structure on economic behavior. Investigations involving extreme contrasts—industrial America and Brahman India—can open up the widest questions of orientation and stratification; but the more extreme the differences in the total historical and institutional setting, the more difficult it is to establish precise correlations. Studies involving much closer comparisons—such as those among the countries of Continental Europe or of the Western Hemisphere, or between Boston and Chicago, or perhaps even Rochester and Buffalo—may in the long run prove most significant in clarifying the problem. These finer analyses, however, will require the sharper use of sharper tools and a wealth of information not now available.

For our purposes there are advantages to selecting examples from Western Europe and, where Europe's diversity forces choice, to focusing on the French case. An area of immediate practical concern with which some familiarity can be assumed (not yet quite true of the various Bongo-Bongo's), Europe has shared with us a basic range of Western institutional developments; and yet it is a society with differences from the United States sufficiently clear to allow of the sort of comparative generalizations necessary in so brief a paper. (In making these implicit comparisons with American development we are, of course, quite arbitrarily isolating one factor from the gross differences in location, size, resources, rates of growth, etc., that have together made for a fundamentally different economic history.)

Looked at on any relative scale European institutions stand out over the past five hundred years as having been exceedingly favorable to economic progress. Europe, after all, gave rise to modern capitalism and to the industrial age—a perspective that must be borne in mind in any examination of this kind. Yet industrial capitalism came in Europe into a relatively stabilized society with unusually explicit cultural traditions, and with a highly elaborated social structure compounding important survivals from each of the great prior social orders that had arisen on successive economic foundations in the European past. From each of these eras and institutional systems the countries of modern Europe have inherited a mixed legacy. Our interest here is in the economic drag, the rigidities and resistances to economic development in this heritage—both as significant to the European future, and as an illustration of the ways in which social structure pervasively and persistently shapes economic activity.

For it seems evident beyond argument that while recognizing the force of Marx's insight, we must modify the metaphor: the new forms have never fully emerged from the womb of the old. New modes of production have everywhere disrupted the existing social order and created new class and power relationships and forms of their own, but they have nowhere succeeded in eliminating important conflicts and contradictions inherited from the pre-existing social structure. The new has grown within what it only partially destroyed. In this sense it could be argued that, for the social revolutionary, the brutalities of Lenin and Stalin perhaps reflect a social diagnosis more accurate than that of Marx; while new economic processes indeed produce basic social changes, probably nothing short of large-scale liquidations can totally destroy an institutional inheritance. For as long as man's habits and memories and ideals carry forward past patterns, this heritage exerts a lasting impress on the subsequent evolution of the social order.

The problem of assessing the impact of this heritage on modern European economic growth is not a simple one. Variations of considerable significance exist between nations and within nations, and the influence has not been wholly unfavorable to economic development. The German case, for example, illustrates particularly well the ways in which a relatively unbroken feudal heritage while containing deep resistances to capitalism can also carry forward certain institutional patterns that serve the needs of a rapid industrialization. This can be seen directly in the relation of the large estate system to labor availabilities and similar points, quite apart from the mixed insight and aristocratic preference in Schumpeter's thesis regarding bourgeois dependence on a landed ruling class. A whole series of comparative studies is needed to explore these issues. France offers a useful place to begin.

III

Perhaps more than any other nation, France has experienced to the full the major sequence of social orders of the European past: the feudal system; the *ancien régime* dominated by the centralized, military monarchy and a surviving aristocracy; petty bourgeois, commercial capitalism, and the institutions of the French Revolutionary settlement. A brief paper cannot attempt to analyze the institutional characteristics of these or evaluate the impact of their survivals.[3] It can at best suggest the kind of relationships involved. This we will attempt by first reviewing in highly generalized terms certain institutional patterns inherited from each epoch; and then indicating ways in which they have adversely affected economic development.

From the system of institutions associated with feudalism and manorialism have come those patterns that probably most distinguished the social structure of the old world from that of the new. From this age, modern France has inherited patterns of social stratification that the Revolution and Republic have never completely eliminated. A society historically rooted in knighthood, seigneurial agriculture, and dependent tenure tended to establish as permanent a system of social rankings based on birth and place, not simply dividing men into the larger categories of those who prayed, fought, and worked, but institutionalizing an elaborate hierarchy of hereditary statuses. To birth and status it also tied property, occupation, training, and social function in the widest sense. The craftsman or villager as well as the count tended to identify himself, his skills, and his heirs with a given place in the social hierarchy.

The prevailing system of ideas and religious beliefs powerfully mobilized sentiments for traditionalism, community, and personal relationships as against change, mobility, and enterprise. It taught that this system of things represented not simply what was, but what ought to be—that the whole architectonic structure was of divine design, and acceptance of one's station and lot in this world a part of the Christian duty. Poverty for the masses of men was assumed, and charity its only relief. The lay elite, geared to values of land and family, arms and honor, by reason of its prestige in the social scale helped fix a set of attitudes that was generally inhospitable to the market and the merchant. These patterns of stratification and their institutional ramifications, though legally eliminated and in some measure socially repudiated since 1789, have remained unevenly but widely diffused in the social structure of modern France.

---

[3] I have attempted somewhat fuller annotated discussions of these institutional conflicts in France in two related papers: "Strains in the Social Structure of Modern France," in *Modern France: Problems of the Third and Fourth Republics,* Edward Meade Earle, ed. (Princeton, 1951); and a comparative study, "The Entrepreneur and the Social Order: France and the United States," in *Men in Business: Studies in the History of Entrepreneurship,* William Miller, ed. (Cambridge, 1951).

Many of these so-called "feudal" patterns were also reinforced by institutions subsequently associated with the centralized monarchy and its attendant aristocracy. From this epoch we might select for our purposes those patterns that institutionalized national power and national glory as ultimate ends of the social effort. Spelled out in terms that emphasized the army, the state, the church, the court, the arts, these patterns extended the prestige of crown and court to the elite services—military, diplomatic, judicial, and financial—and gave important social recognition to the professions and the arts. Business activity tended to be judged and regulated in terms of its relation to the ends of national power and glory, and came in significant degree both to fear an irresponsible fisc and yet look to the state for direction and protection. Even a Colbert was unable to raise the prestige of trade against an aristocracy that elaborated the privileges and vanities of rank as its functions diminished. The tastes and habits of this increasingly self-conscious elite spread patterns of consumption favoring personal service, the château, leisure, and the graces, and giving prestige to the skills of the craftsman, the individualized product of high excellence, the personal relationship in production and exchange.

Over and against these patterns there had grown up during the centuries since the revival of trade and the towns another set of institutions associated with peasant ownership, petty-bourgeois commerce, and bourgeois thrift. Breaking through in the French Revolution, these patterns have become established in France to a degree probably unequaled anywhere else in Europe. The political and social boldness of the revolutionary ideology and settlement was matched by an economic caution. It enshrined the little man, the little economic unit, the little economic aspiration. The lower middle classes—artisan, tradesman, petty official—mightily reinforced by the establishment of a system of peasant proprietors, have written their goals and interests into the institutions of the Republic. While many of these patterns have naturally been favorable to capitalism, the cluster on which we are here focusing—the institutionalization of the small unit, in the peasant farm, the craft shop, the *boutique*—has in its turn established patterns unfavorable to industrial development. These are visible in all fields—primary, secondary, and tertiary.

IV

Broadly speaking, institutional survivals from this historical past have operated against economic development in two main ways: First, by sustaining a range of rigidities to the free flow of men and resources obstructing the full exploitation of productive techniques; and, second, by focusing the efforts and aspirations of men in greater measure on goals and values other than those of increasing material welfare. (Whether this be good or bad is quite outside our immediate problem.) Let us look at their effect on various economic actors and activities.

At the upper end of the business scale these patterns of stratification and social values have operated against aggressive and creative entrepreneurial exploitation of such opportunities as have existed—an effect of considerable economic significance, given the kind of private enterprise economy still prevailing in France. They have limited entrance into business leadership, regularly sending the elite of influence, intellect, and education into the professions, state services, and other careers outside of business, while significantly restricting access to the higher economic levels to those having the proper kinship connections. They have weakened the incentives to aggressive, innovating entrepreneurship and provided only limited social rewards to the successful self-made man (who, significantly, is not only assumed to have been a less frequent phenomenon, but typically has tried to hide rather than boast of his rise from humble origins). Moreover, a status system less oriented about business success and money income as a symbol thereof has partially undercut the force of the particular rewards that capitalism had to give. Perhaps most fundamental of all, the French businessman has never been able to identify himself with national goals—to share that sense of carrying forward a great social effort that has so fortified his American counterpart.

Traditional patterns have also strengthened and legitimized tendencies to the habitual, to continuing with old methods, products, and customers, to remaining within the circular flow. The large range of French business that has remained family business has been typically preoccupied with assuring the status of the family over time, maximizing security and continuity rather than any combination of more dynamic objectives. Inherited emphasis on community and tradition have also provided a set of social attitudes favorable to "acts in restraint of trade." They have facilitated the practice of regulating an industry or a market so as to preserve the community of producers or sellers—to each according to his station—and have worked against the aggressive use of competitive advantage, to a degree that has conspicuously restricted the process of creative destruction so central to *The Theory of Economic Development* (Schumpeter).

If the businessman and the cautious French investor have failed to seek new combinations and the manufacturer to exploit the possibilities of industrial production, their behavior is at least partially analyzable in terms of the effect of social structure on them and in turn on the behavior of French workers, customers, and retailers.

At the bottom of the scale, inherited patterns and horizons have operated to restrict the participation of the French working class in the process of economic development. Still living within horizons of a divinely sanctioned Malthusianism, of a stratified social order in which the masses of men were forever to live at the margin in inferior status, French workers have never really been able to conceive of the possibility of an ever expanding economy or of steadily increasing worker standards of living. They have tended to cling to traditionalisms, to old skills and relationships identified with a given status, to particularistic attachments to place and occupation. These patterns have strengthened familiar resistances to mobility, to the changes involved in increasing productivity, to the working of the impersonal market mechanism, to the demands of large-scale organization and industrialism. Inherited institutional patterns have also powerfully contributed to the fundamental class antagonisms of modern France. Sharing in widely diffused anticapitalist sentiments deriving in part from feudal roots, offered limited chance of economic advancement as a class or of social mobility as individuals, often resentful of their social inferiority in the land of *liberté, egalité, fraternité,* skeptical of ever winning a better life within the given social structure, French workers have in significant numbers repudiated the existing system.

Inherited patterns have also profoundly affected the consumer and the nature of the market in ways unfavorable to industrial development. The upper-class consumer, responding to a scale of values that gave highest prestige to luxuries, quality, individualized products, and hand skills, has tended to resist the standardized outpouring products of mass production. Even in such an American staple as cigarettes, the producer and retailer have had to recognize consumption tastes reflecting traditional regional and class lines. Inherited consumption patterns have also emphasized leisure and personal service rather than durables and the newest factory-made gadgets. The French customer has resisted the invasions of advertising and installment buying, and has shown a persistent preference for the personalized exchange relations he has enjoyed with that extraordinary institution, the typical French retailer. The large masses of consumers have not had the income to provide much in the way of effective demand and have themselves tended to live within traditional class consumption lines even when experiencing increased prosperity.

French commerce has never developed the kind of distribution system organized about the principles of volume and turnover necessary to exploit the potentials of industrial production. To this result social patterns have significantly contributed. In the traditional scale of things, retail trade had the lowest prestige of all the major forms of economic activity, and the business of catering to the popular purse has rarely drawn resources or enterprise. Meanwhile, under the Republic the small retail outlet has been institutionalized as a symbol of petty-bourgeois independence. Its cautions, conservatisms, inefficiencies, and utter disinterest in volume, cost analysis, or the whole merchandising operation have choked the channels of trade for as long as it has charmed its customers. Politically strong enough to check the spread of chain and department stores, protected by law, habit, and ideology, its reign still seems unchallenged.

Finally, in agriculture, land holdings in parts of France divided to this day into small scattered strips of medieval origin testify to the grip of the past. The French peasant shed little but his seigneur and his dues in 1789; his attitudes toward land, family, status, and continuity changed little. These patterns have made for an intensified traditionalism, a resistance to new techniques, to large-scale agriculture, and mechanization—a tenacious clinging to land held over generations even under conditions of rural poverty. The revolutionary settlement institutionalized a system of peasant proprietors that has to this day kept surplus labor on the land and protected small, unprogressive units that are at once economically inefficient and politically invulnerable.

Other examples could be cited: in accounting practices, tax evasion, investment habits, the particular importance of minorities in economic life. Perhaps, however, even so generalized and incomplete a discussion has been able to suggest ways in which inherited institutional patterns have influenced economic activity and major economic actors—entrepreneur, investor, worker, consumer, retailer, farmer. In isolating here the factor of social structure we are not, of course, asserting its primacy in the social process or its adequacy as an explanation of the lag in French economic development. Resources, markets, war, for example, remain fundamental. We are insisting only on the direct relevance of the total social structure to economic activity, and on the need of its further analysis in relation to economic processes if we are to get at the big questions of economic progress.

EXPERIENCE OF UNITED STATES PRIVATE BUSINESS IN LATIN AMERICA

By Henry W. Balgooyen
American and Foreign Power Company, Inc.

I believe I should make it clear at the outset that what I have to say about industrial and general economic development in Latin America and the experience of American investors in that area is from an economic rather than a military or strategic viewpoint. We all know that when our very existence as a free people is threatened by ruthless aggression, decisions may be made and defense measures may be taken that have little or no relation to sound economic theory or normal business practice.

I do not suppose there ever has been a time when the people of a great nation have been so concerned about the welfare and progress of other lands and peoples as have been the people of the United States in recent years. In the days prior to World War II, such far-reaching projects as the Marshall Plan and the Point Four program would have been unthinkable. We then were painfully working our way out of a prolonged economic depression; and our own troubles were too engrossing for us to be greatly concerned about the difficulties of others. During those depression years, our foreign loans and foreign investments were not the popular topics of conversation that they are today. Our experiences in international finance had not been particularly pleasant; and no one, in his wildest imaginings, could have foreseen that this nation, after fighting a war that left it with the heaviest debt burden in all history, would willingly undertake a program of worldwide relief and economic assistance, costing 28 billion dollars in the space of five years; nor would anyone have believed that political groups that had soundly berated American financiers for "forcing" loans and investments upon unwilling recipients and had accused them of exploiting the underprivileged would soon be asking these same investors to expand their foreign commitments.

But first let us take a little excursion into the past so that the experiences and attitudes of our present-day investors may be seen in proper perspective. Let us go back, in memory, to the reckless, carefree days of the twenties—to the days when our national debt was below 20 billion dollars—to those far-away days when we enjoyed the exhilaration but had not learned of the headaches that were to come in our new role as a great creditor nation. We had emerged from the first world conflict, victorious, rich, and powerful. We had worked hard and paid off many of our debts. We had saved our money, accumulated capital, and had built for ourselves the most productive industrial machine the world had known. We had productive capacity in excess of our domestic needs, and international markets were eager for our goods. Outside of the familiar tariffs, there were no trade or exchange restrictions; and the term "dollar shortage" had not appeared in our financial lexicon. Some of our customers did not have ready cash, but if they were short of money, we were only too happy to supply it by extending new loans and investments—for we were an international creditor and, in this respect at least, we were determined to act like one.

We were aware, even in those days, that international loans and investments were not without an element of risk; but it seemed to investors that they were fully compensated by the relatively high rate of return. They had yet to learn that no yields could be high enough to measure the dangers of debt repudiation; and no dividends could be large enough to offset the threat of total loss of property through expropriation. It is true that there were then, even as there are today, a few kill-joy economists and businessmen who wondered whether we were not lending and investing too much, too fast. They wondered whether nations in the very early stages of their industrial development could readily assimilate new capital in the magnitude in which we were offering it. They wondered whether some of the loans would be sufficiently productive to develop the revenues and the foreign exchange with which to service them. They wondered whether countries whose people did not possess the minimum requirements of food, clothing, and shelter were justified in borrowing money for luxuries and nonproductive projects. They were worried by mounting evidences of monetary and price inflation; and they wondered whether the foundations of our international credit structure were sufficiently solid to withstand the shocks that must accompany the next turn of the business cycle. But they were as voices crying in the wilderness.

It was during the prosperous years of the twenties which, in many ways, so closely parallel our recent years of postwar prosperity, that the greatest expansion occurred in our private foreign investments. In the investment field, too, there were excesses—for the "new era" psychosis was no respecter of persons. In every period of inflation, the old economic landmarks tend to become blurred and indistinct. During the twenties, foreign properties were acquired at prices which bore little resemblance to sound values or demonstrated earning power; and the romantic appeal of far lands and strange places led many to invest in foreign enterprises who had neither the experience nor the adaptability required. Nevertheless, most of the direct foreign investments of American businessmen were made for sound, productive purposes; were administered by men of technical competence and executive ability; and were of real benefit to the people of the recipient countries. During the twenties, billions of United States dollars were invested abroad—much of it in Latin America—in the extractive industries (in copper, petroleum, and agricultural development), in transportation, electric light and power, and in general manufacturing. The productivity and usefulness of these private, direct investments stand in sharp contrast to the dismal record for many of the huge government loans of that period that were floated for nonproductive purposes and were dissipated in waste and inefficiency.

The American businessmen who entered the foreign investment field prior to 1929 were no better prepared for the economic upheaval of the thirties than were their counterparts in the domestic field; and their problems, resulting from the world-wide collapse of commodity prices, international trade, and financial markets, were infinitely greater—complicated as they were by currency depreciation, foreign exchange controls, trade restrictions, and, in many countries, the rise of extreme nationalism resulting from the human tendency to blame the foreigner for the national misfortunes.

Whatever romance had attached to foreign investments quickly vanished under these new and unexpected developments. For many of the new enterprises, it was no longer a question of profits but of survival. Some were economically unsound or inadequately financed and quickly fell by the wayside; but the majority that were soundly conceived and capably administered were able to trim their sails, adapt themselves to the changed situation, and ride out the storm. In all cases, the immediate loss in market values and in income to the investor was very substantial. Although the stronger companies gradually recovered their earning power, the glamour was gone, and foreign loans and investments remained in disfavor until the end of the second World War.

I am not trying to assess the blame for the losses suffered by American investors during those depression years. Certainly the fault was not all on one side. Nevertheless, instances of deliberate mistreatment and outright discrimination against American investors were sufficiently frequent and the foreign exchange difficulties were sufficiently prolonged to make many of our people extremely wary of any investment bearing a foreign label—and this wariness still exists.

How can we account for the present emphasis on measures to overcome the investor's reluctance to employ his capital in foreign countries—particularly in Latin America, which is the area with which I am concerned. I believe that there are sound reasons why an increased flow of private capital to Latin America is to be desired, provided the capital is employed for productive purposes and on an economic basis. The mutual interdependence of the American republics was clearly demonstrated in the last war when our ability to supply our allies, while taking care of our own military and civilian needs, depended, in no small measure, on a continuing supply of minerals, fibers, foodstuffs, and other materials from Latin America. It is significant that the production of many of these materials was pioneered and financed by American private investors; and that the present ability of our nation to outproduce the forces of aggression in this, the time of our greatest peril, again depends to a considerable extent upon a continuous and increasing flow of these materials from Latin America.

In peace or war, one of the strongest reasons for favoring the expansion of our private investments abroad is the increase in foreign productivity which they foster. The entire Latin-American area abounds with practical examples of the increased productivity, the enhanced earning power, the higher living standards, and the improvements in health, sanitation, and education that have occurred where a fair opportunity has been provided for the entry of American private capital, with its experienced management and advanced techniques. The areas of economic stagnation, on the other hand, usually coincide with a lack of American private capital investment.

Every individual in Latin America or elsewhere whose productivity can be raised above the subsistence level becomes a potential consumer in the commercial sense. Every person with a peso in his pocket after providing for his minimum living needs can, with others of his kind, make his presence felt in the markets of the world. Higher living standards are to be desired for business as well as humanitarian reasons; and the wider opportunities which come with productive investment can mean more customers for American goods, more jobs for American labor, and closer commercial and cultural ties between our own and foreign countries.

These are all sound reasons for encouraging additional private investments in Latin America. We also hear a great deal about our responsibility as a nation and as private investors to countries in the earlier stages of their industrial development; and great stress is laid on the importance of an outward flow of investment capital as a balancing factor in our international payments. It is said that we *must* export capital and, since we must, it is better to expand our private foreign investments than to accept the alternative of a continuous program of foreign loans and gifts by the United States Government.

This argument, standing alone, does not greatly impress me. Leaving aside the question of the long-term effect on our balance of payments, which is debatable, let us consider what motivates an American businessman in making a foreign investment. While he cannot be oblivious of the larger picture, you may be sure he does not invest with any thought of redressing the international balance of payments, or of fulfilling a real or imagined responsibility toward other countries and peoples. The prospective investor, in most cases, is a large corporation; and the officials who make the decision are very conscious of their responsibilities. It is not their money that is at stake but the savings of thousands of individual stockholders, the real owners of the corporation; and they will hold strictly accountable any of their officials who are unfaithful to their trust.

It seems to me that the situation should be much the same when the funds involved are public monies, and the officials responsible for their expenditure are our elected representatives. All of us, in a sense, are stockholders in our country; and we should hold our government officials strictly to account if we do not get value received from our tax dollars. If a foreign loan or investment is fundamentally unsound and, as such, is rejected by private investors, it becomes no less unsound when the decision is made in Washington rather than in New York or Chicago. Please do not misunderstand me on this point. I am not condemning, out of hand, all government loans and our entire program of foreign aid. But the burden of proof as to whether this vast outpouring of our national wealth is worth while in terms of real benefits to the American people should be placed squarely on our government officials who make the decisions and appropriate the funds; and they, in turn, have every right and duty to hold the recipients to strict standards of performance.

It cannot be urged too strongly, nor repeated too often, that if economic development abroad is to proceed upon sound, practical lines, the major role must be preserved for private enterprise, not government. Foreign countries should be under no illusions as to the ability or the willingness of our government to supply the limitless capital requirements of the world's industrially-retarded areas. We should be particularly frank about our present situation, burdened as we are by an ever increasing load of debt, menaced by a surging inflation, and faced with incalculable expenditures for defense against Communist aggression. It will require all our efforts to maintain the national solvency and avert an economic collapse that would benefit no one but our enemies. It should be made clear that the United States Government has no intention, now or at any other time, to provide funds for development projects for nonmilitary purposes in countries where the shortage of capital is due to failure to provide an economic environment conducive to domestic capital formation and attractive to foreign investment.

We need not hesitate to be outspoken in these matters. It has been my experience and observation, as a representative of an American company with large investments in eleven Latin-American countries, that candor is always appropriate; and good will is not lost by frankness so much as by well-intentioned promises and the creation of hopes that cannot be fulfilled.

In the spring of 1949, I attended a meeting of the Economic Commission for Latin America at Havana, Cuba. As at all meetings of the kind, the promotion of industrial development and its financing were the principal topics for discussion and at one of the sessions the representative of the International Bank for Reconstruction and Development made an excellent presentation of the Bank's viewpoint. He pointed out that the role of the Bank is, at best, an auxiliary one; that development, in the long run, cannot be financed by debt—much less by foreign debt; that reliance must be placed, first, on local effort and resources and, so far as foreign financing is concerned, principally upon direct investments by private capital. The Latin-American members of the Commission were deeply disturbed by the implication of this statement, and several of them rose to protest the futility of relying on private investment to meet their countries' development needs. Several professed to be at a loss to understand the reluctance of private investors in the United States to increase their Latin-American investments; and there was considerable criticism of the failure of our country, with its (supposedly) huge surplus of investment capital, to make a more adequate contribution to Latin-American industrial advancement.

My status at the Conference was that of a consultant, representing the National Association of Manufacturers, and, as such, I was not expected to take an active part in the official sessions. It seemed to me, however, that if there were a purpose in my attending the meeting, it would be to present the investor's viewpoint; and at this point in the discussions, a frank statement was sorely needed. Accordingly, I requested an opportunity to address the meeting. I am going to tell you some of the things I said on that occasion, not that it was a particularly good speech nor an eloquent one, but because it was sincere, and because it illustrates my point in regard to candor in our business and political relations with Latin America.

I began by asking the delegates whether they themselves would willingly invest money in any enterprise, at home or abroad, unless there were good prospects of earning a satisfactory return, in a currency they could use. I emphasized that, with economic freedom, private capital will flow toward those countries where the greatest opportunities exist for its safe and profitable employment. I pointed out that the United States, like the other American republics, is a free enterprise country—that the American private investor is a free agent and his decision as to whether to keep his money at home or to invest it abroad in country A or country B will be dictated only by his common sense and business judgment. If, as stated, North American private capital had shown reluctance to move to Latin America, then there must be practical or psychological barriers impeding its flow. I suggested that it might be constructive to list some of these barriers and consider means by which they might be overcome.

One of the most important barriers, I said, and one which is not often referred to in meetings of that kind is the investor's lack of confidence in the political situation. There can be no question but that a record of repeated political upheavals and sudden changes in government by undemocratic means, often resulting in a new government which disregards previous agreements with investors, tends to frighten new capital which otherwise might be productively invested.

I mentioned as a second major reason for the apparent hesitancy of our investors their general lack of confidence in the foreign exchange situation. Most of the Latin-American countries have had long-term records of successive currency devaluations. Foreign businessmen who made their original investments prior to 1930 have seen local currencies depreciate by 75 per cent or more in terms of United States dollars. This entails a serious loss to investors and makes it extremely difficult, if at all possible, to earn a reasonable profit on the funds originally invested. The historical record also shows that there have been recurring periods of dollar exchange shortages, when exchange has not been made available to service North American investments.

I explained that, fundamentally, the investor is not a soulless and wealthy corporation, but many individuals in all walks of life who need to be assured of a steady income from their savings.

I mentioned, as a third major reason for the lack of investor confidence, the trend toward extreme nationalism which, in some countries, has resulted in expropriation of foreign-owned property without proper compensation, and in restrictive legislation directed against foreign enterprises and foreign personnel.

After mentioning these obvious reasons for reluctance to invest in certain Latin-American countries, I conceded that the fears of some investors might be due to lack of precise knowledge of conditions actually existing in specific situations. Certainly not every Latin-American country has had a bad record in dealing with foreign capital. Investments in certain countries, over a period of years, have proved to be as profitable and as safe as similar investments in the United States. Unfortunately, however, many of these fears are well founded and are based on unhappy experiences that many of our investors actually have suffered.

Finally, I felt it was necessary to make the point that, while certain Latin-American countries might not be receiving foreign investment capital, it was only fair to observe that, in these same countries, neither was local capital being invested productively. People of wealth were keeping their capital liquid, or were exporting it because of distrust, whether justified or not, of the economic or political situation. I asked how foreign capital could be expected to venture in such situations, and I expressed my conviction that, if conditions were provided which would attract local capital into private industry, foreign capital would also be attracted—always provided that the countries' exchange receipts and payments were in proper balance, so that exchange could and would be provided for service on these investments. I concluded by saying that I agreed with the statement of one of the Latin-American delegates, that the provision of guarantees is not enough to assure that foreign capital will be attracted to an underdeveloped country, and that, in my opinion, far more important than any guarantees, is the establishment of a record of consistent fair treatment of foreign enterprises and a history of profitable operations for such enterprises over a period of years.

I must confess that I had some misgivings as to the reception my remarks might receive, although they were made earnestly and in all good will. However, I need not have been concerned. Several of the Latin-American delegates spoke to me after the meeting and thanked me for my statement. A local newspaper editor, who had listened intently when I was speaking, left the press section to express his appreciation for what I had done to clarify the issues, and then he said something which was very significant. He said: "You have told us some things today that we need to hear but seldom, if ever, do hear in these international meetings, which too often deal with generalities rather than practical problems and specific remedies." I am pleased to say that not only his newspaper story but the reports carried by most of the Havana papers were written in friendly vein and with no effort to minimize the seriousness of the questions I had raised.

If I seem to dwell overlong on this matter of frankness and candor, it is because I am so convinced of its importance—both in our business and in our political relations. People who have visited Latin America recently and know the area well are deeply concerned about the deterioration in our national popularity. The reasons, I believe, are quite simple. We never took the trouble to offer an adequate explanation for our concentration on European and Asiatic matters following the war. Latin Americans have never understood the Marshall Plan and why their countries received so little of the postwar economic aid we spread over Europe and Asia with so lavish a hand. First the Marshall Plan and then the Point Four program were oversold to the Latin-American people, arousing hopes that were not to be fulfilled. The recent emphasis that we have placed on Southeast Asia and on African development in our Point Four thinking has disturbed them greatly, since they regard these areas as their competitors in world markets.

Latin America has never understood our foreign loan policy. On a recent trip to Latin America I heard the complaint, time and again, that the United States had neglected its friends but had gone out of its way to extend loans on favorable terms to countries whose records in recent years have not been friendly. The Gillette coffee investigation has been the source of a great deal of bitterness and misunderstanding; and there are many other sources of friction that could be relieved if adequate attention were given to this problem.

Our businessmen in Latin America, also, have given too little thought to their public relations. They have seldom taken the time to defend themselves against the shopworn charges of foreign exploitation that are the stock-in-trade of communist agitators and irresponsible politicians. They have not told the real and inspiring story of progress and worth-while achievement to which they have contributed so largely with their investments, their enterprise, and their social outlook. American businessmen have every right to be proud of what they have accomplished in Latin America, under a variety of handicaps; and they need apologize to no one for the financial rewards that may have come to them along the way.

As a matter of fact, even in these postwar years the average rate of return on the direct investments of American business in foreign countries is only slightly in excess of earnings on similar investments in the United States; and very much less than the returns earned by Latin-American businessmen in local industry and commerce.

I believe I should say, in passing, that the high return expected by local investors is one of the most serious obstacles we encounter in seeking to finance the necessary expansion of the electric power industry in Latin America. The consumption of electricity is growing at a fantastic rate and our industry is one which requires huge amounts of money for capital investment. The interests with which I am connected have had to spend some 160 million dollars since the war on new construction, and we are faced with the need for even greater expenditures to meet demand during the next five years. Finding the necessary dollars for the 40 per cent of our construction costs represented by equipment purchased in this country is a difficult problem; but it is not as difficult as financing the 60 per cent of local currency expenditures. We are devoting a lot of our attention to the development of capital markets in the countries we serve, not only because we have this serious financing problem, but because we thoroughly believe in the principle of sharing the ownership of our subsidiaries with the people of the communities they serve.

Countries in the earlier stages of their industrial development do not have the accumulations of capital nor the active capital markets that are characteristic of the industrial nations. However, as various recent economic studies have pointed out, many of the Latin-American countries are not taking full advantage of their potentialities for domestic capital formation. Partly due to the inflationary situation, savings are not as high as they should be and are not being channeled into productive enterprises. This is true both of the voluntary savings of the relatively small high-income group and the compulsory savings of the general public, effected through taxes and social security funds. Latin Americans have a traditional preference for investments in real estate and commerce, and a high percentage of both private and public savings has gone into housing—in many cases into the construction of office and residential buildings for the high-income groups.

Our efforts to interest local people in the securities of our subsidiaries are further handicapped by the relatively low rate of return that can be earned on such investments, as compared with commercial undertakings, for example, where profits are much higher and the investment is turned over more quickly.

The financing of necessary expansion is only one of our problems as a large investor in public utility enterprises throughout Latin America. Over the past twenty years, we have experienced our share, and more, of the exchange difficulties, political complications, and nationalistic excesses that have tended to detract from the appeal of foreign investments; and we have had other problems of rates, franchises, and government negotiations that are peculiar to the public utility business. With all this, we have done what we can, consistent with economic reality, to provide adequate and satisfactory service. Despite the huge sums that have been invested, many of the areas we serve are still deficient in electric power supply, and this situation is general throughout Latin America. In the last analysis, however, the large additional capital investment that is required in our industry and others can be justified only as conditions are established under which new investment can take place on an economic basis—one which will hold promise of producing a fair return to the investor. The countries that are able and willing to provide these conditions are the countries whose economic progress will be most rapid.

At a recent Washington conference—attended by people in government and private business—one of the government officials, in discussing the capital needs of Latin America, expressed his disappointment at the reluctance of American businessmen to finance a larger part of these needs, and strongly implied that if private capital did not meet this challenge, government would do the job. Here, again, was the inference that private investors had lost their willingness to venture and were forfeiting to government their position in the foreign investment field. This viewpoint, a fairly common one in some circles, is at variance with the experience of the International Bank, whose greatest difficulty has been to find loanable projects. As an official of that institution recently stated: "The fact that the Bank has not been able to invest large sums of money for development purposes is due primarily to the surprisingly few well-conceived and well-planned projects which have been brought to us . . . perhaps the most striking lesson we have learned is how limited is the ability of all underdeveloped country members to absorb capital quickly for really productive purposes."

The experience of the International Bank does not indicate that private capital has been missing many real opportunities in the foreign investment field. The direct investments of American private capital in Latin America since the war have greatly exceeded the total of government loans and credits to that area, and have increased at the rate of about 350 million dollars per year during the past four years—this compared with a net decrease in direct investments during the four years immediately preceding World War II. I believe that this reflects a genuine improvement in the attitude of the Latin-American people and of their governments toward foreign enterprises.

Throughout Latin America, there is a growing awareness of the need for foreign capital and foreign technical experience; and many countries have taken definite steps to encourage new investment. This changing attitude has been given practical effect in legislation providing for improved treatment for foreign capital, particularly in the foreign exchange field. Foreign exchange difficulties have been the principal deterrent to foreign investment in Latin America; and nothing is more effective in attracting new foreign capital than a demonstration of favorable exchange treatment for the capital already invested.

The improvement in the dollar exchange situation during the past year has materially enhanced the outlook for foreign investments. The rise in commodity prices and the increased demand for Latin-American products resulting from the emphasis on rearmament will further increase the dollar exchange receipts of these countries; and so long as the threat of war continues and the Latin-American nations remain outside the areas of conflict, they will continue to be important sources of strategic minerals and other essential materials.

I believe I should not conclude without some reference to the Point Four program, which is of such great interest to the people of Latin America and to American private investors with interests in that area.

Opponents of Point Four have expressed the fear that it might lead to a greatly expanded program of government-to-government lending which would place government in competition with private business in the countries receiving assistance. However, the legislation recently passed by the United States Congress places emphasis on "encourging the exchange of technical knowledge and skills and the flow of investment capital to countries which provide conditions under which such technical assistance can be used effectively"; and the Act clearly states that it is the policy of the United States that requests of foreign governments for Point Four aid "shall take into consideration whether private capital is available, either in the country or elsewhere, upon reasonable terms and in sufficient amounts to finance such projects." It is to be hoped that the Point Four program will be carried out in the spirit of these provisions, and that private investors will be encouraged to continue the excellent work they have been doing in helping to develop the resources and build up the industries of the Latin-American countries. The new investment treaties, of the type recently negotiated between the United States and the Republic of Uruguay, and the tax treaties that our State Department is endeavoring to conclude with a number of Latin-American countries, hold promise of being helpful to this end.

I have a great deal of faith in the future of Latin America and I am sure that its economic and social development will continue to go forward. This does not mean rapid industrialization in all cases. The evolution of a country from an agricultural and raw material economy to the industrial stage is not a matter of a few years but of decades and generations. Some countries will never become highly industrialized; and there is no logical reason why all nations should be. Industrialization per se is not the answer to all the ills that man is heir to; and it has yet to be demonstrated that all men, everywhere, are necessarily happier or better off when working at industrial pursuits. The world is becoming more and more specialized; and I have no doubt that some areas in Latin America, as in North America and elsewhere, will always find it to their advantage to concentrate on the production and sale of primary raw materials and agricultural products.

Many of the Latin-American countries, however, will continue to grow industrially. As in our own industrial history, it is inevitable that mistakes will be made and that progress will not be all in one direction. All the available evidence, however, would indicate that if the major responsibility is assumed by private enterprise, the mistakes will be fewer and less costly.

I think the day is past, and happily so, when our businessmen would invest in almost any foreign project, no matter how speculative or however inadequate the safeguards, provided that the immediate return seemed high enough. Most of our present-day investors have been through the mill; and it is naïve to expect them to blithely send their capital upon romantic excursions to far-away places with no assurance of a safe return.

There is a verse in the *New Testament* which serves to point up the practical side of the investor's problem. It reads like this: "Which of you, intending to build a tower, sitteth not down first and counteth the cost, whether he shall have sufficient to finish it." I trust that I shall not be considered sacrilegious if I paraphrase this to read: "Which of you, intending to build a plant in Latin America, would not first sit down, and count the cost, whether he shall be able to finish it and, thereafter, operate it economically."

I have said that, where it is free to move, private capital will go anywhere where its owners are convinced it can be employed safely and profitably. I am sure that our American businessmen have not lost their initiative and their vision. If a sincere attempt is made by both business and government to create the necessary atmosphere of confidence and good will, American private capital will continue to flow to Latin America for investment purposes and contribute to the steady progress that is being made by the Latin-American countries toward sound economic development and ever higher standards of living for their people.

THE POPULATION OBSTACLE TO ECONOMIC BETTERMENT

By Joseph J. Spengler
Duke University

> "The sire of gods and men, with hard decrees,
> Forbids our plenty to be bought with ease . . ."
> *Virgil*, Georgic I

> "When goods increase, they are increased that eat them; . . ."
> *Ecclesiastes*, 5.11

The population factor is only one of the many by which the course of human betterment is affected; but it is one of the most important. Of this we have evidence in man's frequent manifestation of concern lest population grow too much or too little to maximize some variable in which he is interested.

If we would discuss economic betterment meaningfully, we must choose an index suitable to reflect its course. Of the indices available, the most satisfactory appears to be net output per capita per time period, for this index is both a summary measure of many elements after which man aspires and an end result of that process of technological and industrial change which has transformed the economies of at least a quarter of the world's population and raised its levels of living far above the Oriental plane found almost everywhere two centuries ago. We shall make use of this index, therefore, though without implying that it is, of necessity, highly correlated with that inner state known as physiopsychic well-being.

This paper consist of four parts. The first treats of the determinants of economic betterment; the second, of prevailing population trends; and the third, of the nature of the improvement-retarding effects of population growth. In the fourth part, a quantitative estimate of some of these effects is attempted.

I.

The determinants of economic betterment, as represented by the movement of per capita real income, may be variously classified. For the purposes of this paper they are categorized on the basis of their sensitivity to changes in the population factor (i.e., to changes in population density, composition, or total), most sensitive being those included under *A* and least sensitive those listed under *C:*

A.1 Ratio of a nation's labor force to its population.
A.2 Productive assets *in use* per employed worker.
A.3 The effectiveness with which economic activities are organized.

A.4 Genetic composition of the population.

B.1 International exchange relations.
B.2 Ratio of the employed portion of the labor force to the total labor force.
B.3 Extent to which occupational and spatial distribution of employed human and nonhuman agents of production is optimal in character.
B.4 Skill and efficiency of labor force, properties which reflect (i) the state of the industrial arts and (ii) the educational, scientific, and cultural attainments of a population.

C.1 Social structure.
C.2 Culture.

D.1 Residual determinant.

Since the information available does not permit us to show with precision how per capita real income responds to changes in each of these determinants and how they in turn respond to changes in population, we shall merely indicate how population change affects per capita income through the medium of some of the more sensitive of these determinants. We shall ignore *A*.4 and determinants listed under *C* and *D* and treat only incidentally some listed under *B*.

A.1—the ratio of a nation's labor force to its population—tends to be most favorable when this population has become stationary under Western mortality conditions. For this ratio is conditioned by (*a*) the age composition of the population and (*b*) its state of health. This ratio is most unfavorable to per capita output, therefore, in the underdeveloped countries where the age composition may be something like one-sixth less favorable than in the United States, and where, largely because of poverty due in considerable part to population pressure, the incidence of illness and disease is much higher than in advanced countries. If conditions "*a*" and "*b*" were westernized, per capita income in underdeveloped countries might rise 20 to 30 or more per cent above current levels, other circumstances remaining unchanged.

Determinants *A*.2 and *A*.3, while of significance for all countries whose population has passed the income optimum (in which category fall most countries),[1] are of greatest importance for countries which are both overpopulated and characterized by a high population growth potential. Respecting *A*.2 and *A*.3 this may be said. (1) Output per worker is highly correlated with the amount of productive assets in use per worker. (2) For this reason, and because the consumption of raw materials is highly correlated with national income, population growth eventually tends to make necessary recourse to natural resources which, because they are inferior or less accessible, cost more to exploit. (3) Population growth is accompanied, within limits, by economies of organization which operate to increase output per worker. (4) An increase in numbers makes for an increase in output per capita so long as (*ceteris paribus*) the increment in output per capita due to the increase in economies of organization consequent upon an increment in population more than offsets the associated decrement (if any) in output per capita due to cost-increases in the extractive industries. (5) The population of a country may be said to be of optimum size when, given the cost of supporting the economically unproductive part of the population,[2] the aggregate population is of the minimum size required to maximize per capita income in a manner compatible with the relevant rate of interest and the assumption that other conditions remain constant.[3]

---

[1] See my "Measures of Population Maladjustment," *Proceedings* of the Fourteenth International Sociological Conference, Rome, 1950-51. As is shown in this paper, the population optimum tends to be confused with the spatial optimum. There is no evidence to suggest that the population optimum has increased in recent decades; but there is, as the analyses of A. Toynbee and others suggest, evidence to indicate that the magnitude of what constitutes a viable politico-economic system has been increasing for some decades. If this inference be valid, consolidation of the many nonviable small systems into a small number of large viable systems would be accompanied by some alleviation of both consciousness of population pressure and concern lest numbers be growing too slowly. Presumably, as A. Sauvy suggests (in *Population et Richesse,* Paris, 1949, pp. 34-35), consolidation of smaller units tends to alter their individual optima.

---

[2] By unproductive population is meant that part of a population which, though it produces no income, must be or is supported by the productive population at some aggregate, variable cost C. The best example of an unproductive population is that sequesterable part of a population which is continually required to provide a nation's military forces and which, therefore, includes women, children, and both retired and active military personnel. Since the determinants of the magnitude of this "unproductive" population are not describable with precision in a few words, we shall represent it by p' and the cost of supporting it by $C = f(p')$. Then the total population P may be defined as made up of p' and p, with p representing the "productive" population. Let Y represent the national income which, by definition, is produced by p; y, the per capita income retained by p, which equals Y/P when p' and C have zero values and $(Y - C)/p$ when p' and C have positive values; and y', per capita production of income at the margin; namely $\Delta Y/\Delta p$. If p' and C have zero values and therefore p is identical with P, the population of optimum size is the smallest population associated with the condition of that $y = y'$. (The stipulation that the optimum be the smallest population compatible with this condition must be made if the maximization of income through time is the desideratum since, other conditions being given, the smaller the optimum population, the smaller the drain on nonrenewable resources.) If, however, p' and C assume positive values, the income retained per capita by p will no longer by Y/p but $(Y - C)/p$ which is less than Y/p. It will therefore be to the advantage of the productive population p to increase its magnitude; for, although in the original position y and y' were equal, in the new position y', whose value as yet remains at the original level, exceeds y whose value has been reduced from Y/p to $(Y - C)/p$. The optimum size for p is attained when y' and $(Y - C)/p$ again become equal. Whence, given the magnitude of p', the optimum size for P may be defined as p' *plus* the optimum size for p given by the fact that p is required to support p' to the extent of outlay C. Of course, it being given that p' may feasibly be reduced to zero, the preferred optimum is $p (= P)$, with $y = y'$. If, however, for reasons of security or otherwise, p' cannot be reduced to zero, it is to the advantage of p that its size be increased so long as such increase augments p's retained income y. While this note has been suggested by A. Sauvy's analysis (see *op. cit.* p. 27), the concept of the cost of supporting the economically unproductive population component, if any, has been substituted for his concept of "general expenses."

[3] That the optimum is affected by the relevant rate of interest i may be illustrated as follows, it being assumed that C and p' as defined in the preceding note have zero values. Let W represent productive assets in use; Y, national income; P, population; and y, per capita income Y/P. Now suppose an increase ΔP in population requiring an increase ΔW in W such that the assets/population ratio is unchanged from its initial W/P value. Suppose further that increment ΔP in population is accompanied by Δy_o, an increment in y due to increased economy of organization and Δy_r, a decrement in y due to increased costs in the extraction of raw materials. So long as W and i may be ignored, whether increment ΔP is economically advantageous turns on whether Δy_o is greater or less than Δy_r. But W and i may not be ignored. The increment $P\Delta y$ in the

It follows that the attainment by a country's population of a magnitude in excess of the optimum is an important deterrent to that population's economic betterment. This conclusion is reinforced by the fact that nations whose populations have passed the optimum seldom are again presented with an opportunity to halt their population growth when their numbers have moved into the neighborhood of the optimum. For it is difficult to reduce an actual population in magnitude until it has attained optimum size; and it is rare that circumstances so change as to increase the magnitude of the optimum beyond that already attained by the actual population. The task confronting overpopulated nations, therefore, is not that of striving after an unattainable optimum but that of doing whatever is necessary to increase their per capita income levels even though their numbers are too great. This task includes the prevention of further population growth, however, for reasons to be indicated and because such stimulus as population growth sometimes gives to invention, innovation, and progress, is at a minimum in countries where density of numbers and lowness of per capita income occur jointly.

Let us turn now to determinants *B*.2-*B*.4. While one may, under given circumstances, accept the thesis of the stagnationists, it is nonetheless apparent that only under certain institutional conditions does a low or a negative population growth rate make for unemployment. Presumably, an analogous argument may be made in respect of countries where great population density, together with continuing population growth, appears to be producing unemployment. Regional and occupational differences in the rate of natural increase may operate to prevent a country's employed population from becoming optimally distributed in space and among occupations when these differences are not offset by social arrangements designed to secure an optimal distribution. Underutilization of labor of demographic origin appears to be most pronounced in underdeveloped countries where there is considerable agricultural overpopulation. Of importance also is the absorption of capital by population growth. For, as will be shown, such absorption reduces the rate at which the labor force can improve its health, skill, efficiency, and material equipment.

---

income of the initial population P, which accompanies the increment ΔP in population, entails an increment ΔW in the nation's stock of capital for the equipping of the increment ΔP in population. This increment ΔW entails an annual interest cost $i\Delta W$. Accordingly, the initial population P will find advantage in the increment Δy in its per capita income (an increment supposedly associated with increment ΔP in population) only if $(P\Delta y/\Delta W) > i$. Of course, if the initial population P derives from ΔP some noneconomic advantage such as a feeling of greater security, it will deem ΔP advantageous even though $(P\Delta y/\Delta W) < i$. Should p' and C have positive values (see note 2) these may be taken into account.

II

It is growth rather than nongrowth of population that is a major obstacle to man's economic betterment in all but a few countries. The stagnationist's explanation of unemployment, insofar as it can be formulated in valid terms, is relevant at present only to about a fifth of the world's population; and this fifth has attained a relatively high income level and is capable of making effective unemployment-preventing adjustments to the nongrowth of its numbers. Most of the remainder of the world's inhabitants are found in countries where population growth is already retarding the improvement of man's living standards. It is of these countries, therefore, that the rest of my paper treats.

That population pressure is a major obstacle to economic betterment in most of the world is readily suggested, though not always demonstrable with precision. Data indicate that per capita income tends to be low where crude population density is relatively great and to be high where it is relatively low. This relationship would be even more marked were the influence of differences in transfer and trading relations taken into account, since these are relatively favorable in most if not all of the densely populated countries where per capita income is relatively high.

That population growth will continue to be a major obstacle to the betterment of man's material lot is apparent. Only about one-fifth of the world's population appears to be approaching a stationary state, and this fifth is composed principally of peoples already enjoying relatively high per capita incomes. Something like another fifth, though describable as proto-stationary, may experience an increase of 50 or more per cent in a half-century. Yet, many of the peoples composing this fifth already have difficulty extracting more than mediocre incomes from their limited equipment of land and resources. The balance of the world's population, close to 60 per cent, is expanding, even though most of its members already receive very low incomes and are badly equipped with land and resources essential to the comfortable support of expanding numbers.[4] Evidently, a major fraction of the population growth in prospect will take place among peoples not well equipped to supply even their present wants.

How much population growth will take place in high-growth-potential countries is not empirically determinable with certainty at present. However, judging by past experience and abstracting from the possibility that a cheap contraceptive could be widely and rapidly diffused, the 1.5 billions concerned and living in Asia,[5] Africa, and Latin America may, in the absence of pronounced obstacles, increase by 100 to 200 or more per cent before they acquire Western fertility patterns and develop a Western age structure; for life expectancy at birth is only about half as high in most of these regions as in the Western World. The order of magnitude of the growth in prospect is suggested by the fact that, should the populations of these regions treble, the population of the world, now close to 2.4 billions, would exceed 5.5 billions a century from now. It is evident, therefore, that, unless a cheap, easily-used contraceptive is developed and widely diffused, population growth is likely to eat up much of those fruits of technical progress which escape the maws of war.

---

[4] For supporting data see my "Aspects of the Economics of Population Growth," *Southern Economic Journal*, 1948, and my "Economic Factors in the Development of Densely Populated Areas," *Proceedings* of the American Philosophical Society, Philadelphia, February, 1951.

III

Improvement of the economic condition of the some 60 per cent of the world's population whose incomes are very low, often miserably low by Western standards, is possible only on condition that the economies of these peoples are completely transformed. The outstanding characteristic of these economies is their dominance by nonmechanized agriculture, something like three-fourths of their working population being engaged in agriculture pursued in an archaic manner. Accordingly, economic progress presupposes a considerable mechanization and transformation of the agriculture of these countries together with the transference out of agriculture of such "excess" labor as is engaged therein and the creation of a labor force that, in both its agricultural and its nonagricultural branches, has acquired the attitudes, values, and occupational aptitudes essential in rational, mechanized economies.

The development of branches of industry and commerce suited to absorb both the growing nonagricultural labor force and the workers flowing in from agricultural areas involves a number of coinciding steps. (1) There must be brought into being a sufficient supply of persons capable of performing "entrepreneurial" functions. (2) A system of incentives suited to an industrial society must be created. (3) Appropriate facilitating economic, educational, and governmental institutions must be formed. (4) Adequate support must be given to the development of public utilities in appropriate amount and to the establishment of industries which, for one or several reasons, are highly advantageous to economies in the stage of development characteristic of most of the countries under consideration; i.e., industries capable of utilizing available resources and labor, or of satisfying the more urgent wants, or of easing the pressure for foreign exchange, or (because they are complementary to other industries in existence or being established) of reinforcing the industrial development under way.

---

[5] In 1947 that 20 per cent of the world's population which lived in noneastern Europe, North America, and Oceania enjoyed a mean expectation of life at birth of 50 to 60 or more years; the 15 per cent living in Eastern Europe and Japan, 40 to 50; the 6.6 per cent in Latin America, 35 to 40; and the 58 per cent in Asia and Africa, close to 30, as a rule. See *World Population Trends,* United Nations, pp. 10-13. Let e represent life expectancy at birth and k the annual number of births. Then, on the assumption that k remains unchanged, the population of a country will approach and finally reach ek, increasing as e increases. If, as has always been the case in the past, fertility fails to fall fast enough to offset increases in e, k will increase for a time, with the result that the final population becomes not ek but $e(k + \Delta k)$. Thus, if e doubles and k increases by one-half before it levels off, the population will treble. For example, by the time Japan's population has completed the growth cycle begun in the mid-nineteenth century, its population will have attained a magnitude three or more times that obtaining in 1850. Having indicated that "at least a threefold multiplication is implicit in the processes by which peoples hitherto have achieved low birth and death rates," M. C. Balfour, R. F. Evans, F. W. Notestein, and I. B. Taeuber conclude that "in the Far East . . . we have no reason to expect a smaller multiplier." See *Public Health and Demography in the Far East* (Rockefeller Foundation, 1950), pp. 6-7. What is said here is applicable to other parts of Asia and to much of Africa and Latin America.

Industrial evolution along these lines involves two further conditions, the capacity to meet which tends often to be greatly reduced by population growth: (*a*) the availability of a sufficiency of land and/or natural resources, (*b*) the formation and/or acquisition of capital at a rate commensurate with the rate of industrial development projected.

Further population growth will accentuate such shortages of land and/or resources as exist in countries where a condition of population pressure already obtains. In North America and Oceania, most of whose population is approaching a stationary state, both resources and land are relatively abundant. In Europe both land and resources are relatively scarce, but much of the population is approaching a stationary state. In Africa, where the population growth potential is high, resources and in some measure land are relatively abundant; but their distribution in space relative to that of population is not such as to afford relief to more than a portion of the inhabitants. Further growth, therefore, will retard the improvement of the economic state of those African populations which lack ready access to lands and resources unexploited or ineffectively exploited at present. In South America, where the population growth potential remains high, both land and ore resources are relatively plentiful; notwithstanding, industrial development promises to be greatly restricted by the shortage of coal, water power constituting the principal widespread potential source of energy. Land and energy resources appear to be relatively plentiful in the Soviet Union; still, according to some estimates, iron ore resources are both relatively scarce and not too well located in space. The most acute actual and/or potential shortages, however, are found in Asia, where live over half the world's population and where numbers may well treble in a century. For already Asia's population is short of land, hardly as well equipped with power resources relative to population as are the peoples of Europe, and only about one-fifth as well supplied with iron ore reserves as is the rest of the world. Furthermore, the spatial factor is unfavorable, the bulk of the iron resources of Asia being situated in India, and the bulk of the power resources in China. Presumably, then, only in parts of Africa and South America will further population growth prove economically advantageous. Redistribution of population will serve to correct such localized shortages of numbers as are to be found on other continents.

When a country is short of land and/or raw materials and this shortage is being aggravated by continuing population growth, it may resort to several complementary remedies. First, it may attempt to step up its rate of capital formation, since capital is needed to exploit such natural resources as are at hand, to provide substitutes for critical resources in relatively short supply, to facilitate technical progress, to create good health, and to implant productive skills and attitudes in the labor force. Yet, it is difficult to establish a very high absolute or relative rate of capital formation, when, as is the case in most lands where population pressure and high growth potentials are found, per capita income ranges between $25 and $150 and the relatively wealthy minority devotes most of its income to consumption instead of to capital formation. Second, relief may be sought in foreign lending and foreign trade. However, foreign loans can relieve in but limited measure a shortage of capital imputable to a low rate of domestic capital formation, how much foreign capital an economy can effectively absorb being governed, for technical and economic reasons, by its rate of domestic capital formation. Furthermore, international trade can significantly (but by no means completely) counterbalance a domestic shortage of natural resources only after the domestic economy has been appropriately developed and other relevant conditions have been met. The capacity of a people to find relief for poverty in capital accumulation will be less, in all cases in which the population is of supra-optimum size and land and/or resources are relatively lacking, when a population is growing than when it is stationary.

In sum, population growth operates in four ways to retard the betterment of man's material condition. First, it increases the pressure of numbers upon a nation's land and resource equipment as of any given time. Second, it tends to accentuate this pressure through time by accelerating the rate at which the store of exhaustible and nonreplaceable natural resources is used up and the costs of their use are increased. Third, it diminishes the rate at which capital can be accumulated, and this diminution is greatly accentuated when, as is the case in most overpopulated countries, much potential capital is utilized in maintaining for a few years children who eventually die before they reach a productive age.[6] Fourth, given the rate of capital formation, the rate at which the equipment of the labor force can be increased is reduced. Only in the small number of countries where the population is of infra-optimum size will an increase in numbers, through its salutary influence upon economic organization, more than offset the adverse effects enumerated.

IV

Both the problem being posed and the consequences of population growth may be translated into terms of per capita real income. Consider first the problem itself. Per capita income in many lands is only a minor fraction of per capita income in Oceania, North America, and Northwest Europe. Furthermore, judging by the past, we may assume that for some time to come per capita real income will increase 1 to 2 per cent per year in these parts. It follows that, if the material condition of peoples living in very low-income areas is to improve both absolutely and relative to that of high-income populations, these peoples must advance their per capita incomes appreciably more than 2 per cent per year for many years to come. While such an advance may tend to be restrained by the relatively slower rate of growth of the high-income countries,[7] it will be facilitated by the higher rate of technical progress of which the low-income countries are susceptible in virtue of the fact that their economies remain founded upon technically primitive methods of production.

Since an increase in a nation's capital equipment per worker tends to be accompanied by an increase in output per worker, population growth may be looked upon as a deterrent to the increase of per capita income whenever a nation's population is of supra-optimum size. For population growth, together with excessive mortality among those of infra-working age, diverts resources from the formation of capital to the formation of population, whilst the necessity of equipping increments in population makes the magnitude of the increment in per capita equipment lower than it would have been had the population not grown.

---

[6] D. Ghosh estimates at something like 22.5 per cent of the Indian national income the cost of maintaining those who die before they reach the age of 15. The corresponding figure for England is put at 6.5 per cent. See *Pressure of Population and Economic Efficiency in India* (New Delhi, 1946), p. 22. In 1934–38, according to C. Clark, capital formation approximated only 6 per cent of India's national income. Analogous conditions are found in many other parts of Asia.

[7] Suppose we divide the countries of the world into two categories, the rapidly growing, G, and the slowly growing, S, with their rates of growth represented by R_g and R_s. Then $R_g = f(R_s)$, the specific relation between the two rates turning on whether G and S are primarily substitutes for each other, complements to each other, or independent systems. If, as appears likely, the dominant form of relationship will be a complementary one in the early stages of the development of G, R_s will exercise a restrictive influence upon R_g. This influence will diminish in time, however, as the complementary type of relationship gives place to one that is substitutive or independent. Presumably, an economy that is large (e.g., the Russian or the Chinese) can more easily free its rate of expansion of the conditioning influence of expansion elsewhere than can an economy that is small and relatively short of elements requisite for economic expansion. That the less developed countries are significantly dependent upon the more developed countries is suggested by data presented in F. Hilgerdt, *The Network of World Trade* (Geneva, 1942), especially pp. 37 ff., and Tse Chun Chang, "A Statistical Note on World Demand for Exports," *Review of Economic Statistics*, 1948, pp. 106 ff.

Let us first suppose that both the rate of saving and the income-producing power of capital are independent of the rate of population growth. Then a 1 per cent increase in population will be purchased at the cost of something like a 1 per cent increase in per capita income. Given the validity of these assumptions, the 1 per cent per year increase in population roughly characteristic of many densely populated low-income countries operates to prevent an increase of about 1 per cent per year in per capita income. Thus, if per capita income would grow 3 per cent per year in the absence of population growth, it will grow only about 2 per cent per year when the population is increasing 1 per cent per year.[8]

The assumptions just made must be modified, however. First, the income-producing power of capital is not independent of changes in the size of the labor force. On the basis of past experience, when a 1 per cent increase in both the employed labor force and the stock of capital or wealth in use is accompanied by a 2 per cent increase in

---

[8] Let Y represent national income; W, the wealth or capital used to produce that income; ΔY and ΔW, the annual increment in Y and W, respectively; r, the annual rate of growth of population P; y, the per capita income Y/P; j, the annual rate of increase in per capita income, $\Delta y/y$; a, the annual rate of capital or wealth formation expressed as a percentage of Y, namely $\Delta W/Y$; and s, the increment in Y consequent upon an increment in W, namely $\Delta Y/\Delta W$. Let us assume for the sake of simplicity, furthermore, that s remains constant for the period under consideration. It follows that

$$j = \frac{1 + as}{1 + r} - 1$$

If population is not growing and r has a zero value, $j = as$. Accordingly, if the value of s were independent of that of r, the value of j would be reduced by approximately r. Thus if a has a value of 0.1, the annual rate of saving approximating 10 per cent of the national income and s has a value of 0.25 (on the assumption that W/Y has a persisting value of about 4), j will have a value of 0.025 so long as population is not growing and r has a zero value. If, however, r has a value of .01, the value of j will approximate 0.015 instead of 0.025. If a has a lower value when r has a value of .01 than when r has a zero value, the value of j will be further reduced. See note 10 below.

This formulation does not take net capital imports into account. If these are represented by A, then as in the above equation becomes $(a + A)s$. There is a practicable upper limit to A/a. In the paper cited in note 4 above it is suggested that the average upper limit to A/a may be in the neighborhood of one-third. If it be true that the poorest half of the world's population produces only one-tenth of the world's income, and if it should save and invest 0.3 of this, it still could use (on the supposition that A/a cannot long exceed one-third) only about one-fifth of the savings which the richest tenth can supply if they save and invest 10 per cent of the 55 per cent of the world's income which they supposedly receive.

income, this 2 per cent may be imputed to the forces generating it somewhat as follows: technical progress, 1; labor, 0.7; other productive agents, 0.3. Accordingly, given a 12 per cent saving rate, a 1 per cent increase in the labor force, and technical progress as indicated, about 7/26 of the 2.6 per cent increase in national income would be attributable to the 1 per cent increase in the employed labor force. In general, it is probably safe to say that 25 to 35 per cent of the annual increase in output consequent upon increases of 1 and 1 to 3 per cent, respectively, in labor and capital are attributable to the increment in labor.[9] Secondly, account must be taken of the absorption, by population growth and relevant premature mortality, of resources that would otherwise have been transmuted into wealth or capital. When these two conditions are taken into account, a 1 per cent increase in population is usually found to be purchased at a cost of between somewhat less and somewhat more than a 1 per cent increase in per capita income.[10] It should be noted finally that the productivity of reproducible capital will be higher *ceteris paribus* when the land and natural re-

---

[9] See J. Tinbergen, "Zür Theorie der langfristigen Wirtschaftsentwicklung," *Weltwirtschaftliches Archiv*, 55 Band, Heft 3, 1942, pp. 511-547. See also E. C. Olson, "Factors Affecting International Differences in Production," *American Economic Review*, May, 1948, pp. 502-522. In the four largest industrial nations in 1870-1913, at the time when about 10-15 per cent of the national income was saved, population was growing about 1 per cent per year, and national income was increasing 2.1-2.5 per cent per year, this increment was distributable somewhat as follows: population, 0.7; capital accumulation, 0.4-0.8; technical improvement, 1.0. Cp. Tinbergen and J. J. Pollak, *The Dynamics of Business Cycles* (Chicago, 1950), p. 128.

[10] Let s, as defined in note 8 above, be divided into s_r and s_n where s_r is due to population growth r and s_n is due to other circumstances. Further, let $a = a_n - a_r$ where a_n represents the annual rate of saving or capital formation when $r = O$, and a_r represents the reduction in a_n due to r's having a positive value. Then the annual rate of increase in per capita income

$$j = \frac{1 + a_n s_n + a_n s_r - a_r s_n}{1 + r} - 1.$$

When r has a value of zero, the value of j becomes as_n. It follows that j will have a greater value when r has a zero instead of a positive value so long as $(r + a_r s_n) > (a_n s_r)$. The values to be assigned to these variables vary with situation. Suppose we make $a_n = 0.2$, and $a_r = 0.1$. Let the elasticity of productivity for capital be 0.3 and that for population be 0.7. Finally let technical progress increase Y one per cent per year. (Actually the capacity of technical progress to increase income is itself a function of a, but here it is treated as a constant fraction of Y.) If $r = O$, j becomes .025; but if $r = .01$, j approximates .0094. Under the assumed conditions, therefore, r's having a value of .01 instead of zero reduces the annual rate of increase in per capita income by about three-fifths. The value to be assigned to a_r in any particular case depends both upon the magnitude of r and upon the amount of resources absorbed by premature mortality associated with r and destined, in the absence of such mortality, to be saved and invested.

The income optimum population may be defined in terms similar to those used above in this note. Let $s = s_n[1 + f(r)]$ where s and s_n are defined as above and $f(r)$ replaces s_r. Then

$$j = \frac{as_n\,[1 + f(r)]}{1 + r}.$$

When r has a zero value j becomes as_n. When r has a positive value j is higher than when r has a zero value only on condition that $f(r) > r$. Accordingly, population maladjustment may be said to increase whenever, as is usually the case, $r > f(r)$.

sources with which this capital can be combined are relatively plentiful. The absence of this condition from many low-income economies makes more difficult their counterbalancing population growth by capital formation.[11]

By way of summary it may be said that population growth is a major obstacle to economic betterment in most parts of the world. It is retarding capital formation, accelerating the rate of depletion of the world's limited store of nonreplaceable resources, augmenting the rise of costs in increasing cost industries, and decelerating the rate of increase of per capita income. Whether a cheap contraceptive, together with a set of motives conducing to its widespread use in the overpopulated parts of the world, can be developed in good time remains to be seen. It is evident, however, in view of the limitedness of the fund of nonreplaceable resources at the disposal of mankind and in view of the dangers to the security of the relatively stationary peoples implicit in the continued growth of peoples living in overpopulated lands, that the former should not give impetus to the multiplication of unfriendly components of the latter.

---

[11] Colin Clark concludes that the value of s, when only reproducible capital is taken into account, rises as reproducible capital per worker and output per worker per hour increase. With income and reproducible capital per worker represented by y and c, the ratio y/c rises from about 0.22 when real income in I.U. per man-hour approximates 0.10 (the figure for India in 1944 is put at .09) to about 0.28 when hourly real income is 1.0 (as in the United States in 1945). (See *Review of Economic Progress*, II, 1950, No. 1.) Since this increase in y/c, granted the accuracy of the data on which it is based, is not attributable to an increase in nonreproducible capital or labor, it must be attributed to technical progress and similar output-increasing forces. While Clark's data relate more largely to time than to space, they lend support to the view that, insofar as space may be equated to time, the spread of Western methods in space will be accompanied for a while by an increasing rate of technical progress in the underdeveloped countries.

DISCUSSION

Paul A. Baran: There is serious danger in the discussion of the economic and social problems of underdeveloped countries of paying so much attention to individual trees as to lose sight of the size and the contours of the forest. To be sure, the number of obstacles blocking the backward areas' road to progress is legion, and the adequate comprehension of all and each of them represents a challenge to the analytical zest and ability of economists and other social scientists. Yet, it would seem to me that the only way in which we could contribute to the urgently needed clarification of the issues involved and arrive at some tangible conclusions is to cut through the maze of what could be safely regarded—at least in the first round of the debate—as secondary aspects of the problem, and to focus our attention on the "heart of the matter."

Leaving aside the gnawing uncertainty as to whether economic progress is an "absolute good" (the peoples living under conditions of squalor and starvation in the underdeveloped countries of the world would probably join me in assigning only low priority to this philosophical inquiry), we may state boldly and crudely that the first and foremost need of underdeveloped countries is a substantial and rapid increase of total output.

The only way to secure such an increase on a permanent basis is rational utilization of available unutilized or underutilized resources. This reservoir of dormant productive potentialities consists partly of unexploited or inadequately exploited natural resources (mineral, agricultural, etc.). Its main component, however, is the vast multitude of entirely unemployed or ineffectively employed manpower.

Both the human and the material resources going to waste in underdeveloped countries can be turned to useful purposes only by an expansion of the available technical equipment. An increase of agricultural output calls for more agricultural machinery, better livestock, chemical fertilizers, and the like. Industrial production can be raised only by the development of appropriate plant and facilities. These two courses of action must by necessity go together. Not only is the modernization of agricultural production largely dependent upon the availability of an industry supplying agricultural implements, but—what is more important—only a growing industrial economy can provide an outlet for the rural surplus population.

Yet the modernization of agriculture and the expansion of industry are predicated upon large-scale investment in productive facilities. Such investments are not forthcoming and cannot be expected under the social and economic conditions prevailing in many underdeveloped countries. The very low aggregate incomes at the disposal of the nations inhabiting the world's backward areas leave little room for capital accumulation. Even with popular consumption at the rock-bottom level (or below), the "surplus" that can be mobilized for investment is bound to remain small. Thus in the absence of foreign aid, economic growth in underdeveloped countries would have to remain slow under any circumstances.

What aggravates the situation—frequently beyond political endurance—is that even such meager surpluses as are being squeezed out of the population are frittered away on unproductive purposes. Accruing, as they do, to a relatively narrow upper-income stratum, these surpluses are used largely to support extravagant living on the part of their recipients. A landed gentry maintaining a feudal style of life with large outlays on housing, servants, and travel does not save the capital needed for the improvement and modernization of agricultural estates. Nor are rich merchants and businessmen in backward areas tempted to invest in long-run industrial projects. In underdeveloped countries new industrial venture must frequently, if not always, break virgin ground. It has no functioning economic system to draw upon. It has to organize with its own efforts not only the productive process within its own confines, but it must provide in addition for many, if not all, the necessary outside arrangements essential to its operation. It does not enjoy the benefits of so-called "external economies."

Yet investing in road building, financing construction of canals and power stations, organizing large housing projects, etc., transcend by far the financial and mental horizon of capitalists in underdeveloped countries. Not only are their resources too small for such ambitious undertakings, but their background and habits militate against commitments of this type. Brought up in the tradition of merchandizing and manufacturing consumers' goods—as is characteristic of an early phase of capitalist development—businessmen in underdeveloped countries are accustomed to rapid turnovers, large but short-term risks, and correspondingly high rates of profit. Sinking funds in enterprises where profitability could manifest itself only in the course of many years is a largely unknown and unattractive departure.

The reluctance to engage in long-run projects is by no means irrational as far as the interests of individual businessmen are concerned. Useful or even essential as the long-run developmental projects may be from the standpoint of the community as a whole, their profitability to individual owners is by no means assured.

The difference between social and private rationality that exists in any market and profit-determined economy is thus particularly striking in underdeveloped countries.

This difference could be bridged only by a determined action on the part of the governments of the backward areas. A fiscal policy could be adopted that by means of capital levies and a highly progressive tax system would eliminate nonessential consumption. The savings thus enforced could be channeled by the government into productive investment. Power stations, railroads, highways, irrigation systems, and soil improvements could be organized by the state with a view to creating an economic environment conducive to the growth of productivity. Wherever private capital refrains from undertaking certain industrial projects or wherever monopolistic controls block the necessary expansion of plant and facilities in particular industries, the government could step in and make the requisite investments. Where developmental possibilities that are rewarding in the long run appear unprofitable during the initial period of gestation and learning and are therefore beyond the horizon of private businessmen, the government could undertake to shoulder the short-run losses.

These are all positive departures calculated to stimulate the expansion of output and the increase of productivity. In addition, an entire arsenal of "preventive" devices is at the disposal of the authorities. Inflationary pressures resulting from developmental activities (private and public) could be reduced, or even eliminated, if outlays on investment projects could be offset by a corresponding and simultaneous contraction of spending elsewhere in the economic system. What this would call for is a taxation policy that would effectively remove from the income stream amounts sufficient to neutralize the investment-caused expansion of aggregate money income.

In the interim, and as a supplement, speculation in scarce goods and excessive profiteering in essential commodities could be suppressed by rigorous price controls. An equitable distribution of mass consumption goods in short supply could be assured by rationing. Diversion of resources in high demand, such as construction materials, possibly metals, skilled labor, etc., to luxury production or to investment in plant and facilities designed to produce luxury goods could be prevented by allocation and priority schemes. Strict supervision of transactions involving foreign exchanges could render capital flight, expenditure of limited foreign funds on luxury imports, pleasure trips abroad, and the like impossible.

What the combination of these measures would accomplish is a radical change in the structure of effective demand in the underdeveloped countries and a reallocation of productive resources to satisfy the need for economic development. By curtailing consumption of the higher-income groups the amounts of savings available for investment purposes could be markedly increased. By the resulting elimination of production of nonessential goods and services, as well as of investment in plant and facilities that are to produce nonessential goods in the future, scarce resources could be freed for investment projects. The squandering of limited supplies of foreign exchange on capital flight or on importation of redundant foreign goods and services could be prevented and the foreign funds thus saved could be used for the acquisition of foreign-made machinery needed for economic development. The reluctance of private interests to engage in enterprises that are socially necessary but may not promise rich returns in the short run would be prevented from determining the economic life of the backward countries.

The mere listing of the steps that would have to be undertaken to assure an expansion of output and income in an underdeveloped country reveals the utter implausibility of the view that they could be carried out by the existing governments of most underdeveloped countries. The crucial fact rendering the realization of a developmental program illusory is the political and social structure of the governments in power. The alliance of property-owning classes controlling the destinies of most underdeveloped countries cannot be expected to design and to execute a set of measures running counter to each and all of their short-run vested interests. If to appease the restive public, blueprints of progressive measures, such as agrarian reform, equitable tax legislation, etc., are officially announced, their enforcement is willfully sabotaged. The government representing a political compromise between landed and business interests cannot suppress the wasteful management of landed estates and the conspicuous consumption on the part of the aristocracy, cannot suppress monopolistic abuses, profiteering, capital flights, and extravagant living on the part of the businessmen. It cannot curtail or abandon its lavish appropriations for a military and police establishment providing attractive careers for the scions of wealthy families and a profitable outlet for armaments produced by their parents—quite apart from the fact that this establishment serves as the main protection against popular revolt. Set up to guard and to abet the existing property rights and privileges, such government cannot become the architect of a policy calculated to destroy the privileges standing in the way of economic progress and to place the property and the incomes derived therefrom at the service of society as a whole.

These are in my opinion the main problems confronting the underdeveloped countries. They were solved in a violent way in some countries. They may be solved in a peaceful, evolutionary way in others. They will have to be solved in some manner everywhere.

DIFFERENTIAL ECONOMIC PROGRESS: SOME CASES, COMPARISONS, AND CONTRASTS

JAPAN VERSUS "ASIA"

By Daniel H. Buchanan
University of North Carolina

For the present discussion, economic progress is taken to mean the development of modern industry in place of the industrial life of backward or underdeveloped countries. In this paper we shall also take for granted that Japan has made considerably greater economic progress, in this sense, than has been made by any other part of "Asia." This fact is so generally recognized by all students of the Orient that no time or space will be given to establishing it.

Some oriental countries, especially those under the control of European peoples, have adopted lesser parts of the Occidental economic system. This applies to the Philippines, Indonesia, Indo-China, Malaya, and Burma. Most of these developments have been along colonial lines, with Occidental capitalists exploiting rich natural resources by means of cheap Asiatic labor. In Japan the new economy was an achievement of the Japanese themselves. They owned, built, and operated it with only a bagatelle of borrowed capital. India and China have had much contact with European peoples in their own countries and it is mainly to them that Japan should be compared.

The change in Japan was less abrupt than is often supposed. Missionaries or traders had come from Spain and Portugal, Holland, and England for a century between 1540 and 1640; and when Japan's exclusion policy was adopted at the latter date, Chinese and Dutch merchants were allowed to remain and trade on the tiny island of Deshima at Nagasaki. There they were still in 1850. The ruling authority under the secluded emperor for some 250 years up to the "restoration" in 1868 had been the Tokugawa *shogunate* based at Tokyo. In the southwest, powerful rival lords smuggled people out and in and, with others, hastened the decline of the Tokugawa and the establishment of a new government with the imperial family "restored" and themselves in the primary positions of power. These Japanese leaders were already aware of happenings abroad, largely through contact with the Dutch at Nakasaki. They learned of Western scientific achievements and economic changes. They knew vaguely of the great new economic and military power of England, of the rising United States, and of other Western countries. They also knew of the European buccaneering exploits in Indonesia, Malaya, and India where the British crown government had been set up after the Sepoy rebellion in 1857. They knew especially of China's defeat and humiliation by the British in 1842, and by the combined powers in the 1850's and 1860's. They had seen the warships of various Occidental nations which had visited Japan at intervals, all demanding a chance to trade. The Japanese were much disturbed and when Perry arrived this event created, for two or three decades, almost indescribable confusion. The threat of the long-distance bomber and the atomic bomb today is hardly more horrifying.

Besides this knowledge of the new economy in Europe and America, Japan's own economic organization had already undergone an evolution of lesser degree but of the same kind as that which preceded the coming of the factory system in several Occidental countries. Japan already had a fairly elaborate division of occupations, based on handicraft, both retail and wholesale. A large urban population had grown up in the castle towns, especially at the Shogun's capital in Tokyo, a city of nearly one million, where the chief feudal lords and their retainers and families were compelled to spend a considerable part of their time. To serve the developed wants of these populations, a large trade, based mainly on retail, but to some extent on wholesale, handicraft had been developed. There was a big trade in rice, cloth, lumber, hardware, and many other items of consumption. Conducting this trade were a number of wealthy families which combined manufacturing, trading, and banking, including domestic exchange. There were even factories employing up to a hundred persons. The Mitsui employed over a thousand persons in their Tokyo shops and offices in 1800.

These economic conditions did not differ too widely from those prevailing in other parts of Asia, especially in parts of India and China. There, too, were native merchants and workers, considerable production for near and some distant sale, and facilities for loaning and transferring money. Those countries also had considerable foreign trade. Japan had a proportionately large "parasitic" population with developed tastes. Especially in India, a larger proportion of goods were made locally, from village material, for the village, and by village people of caste occupations. Some earlier writers referred to these village castemen as "manorial craftsmen."

There were, however, still more compelling reasons than internal economic opportunity for Japan's rapid industrialization. The capital fact about the economic modernization of Japan in the last century is ✓ that the leaders were in deadly fear lest their country should be conquered by the powerful and aggressive Occidentals: lest their heaven-descended emperor and his people should become a subject race. They had been a fierce military people but they now realized that they were utterly outdated and helpless. They must adopt the new industrial and commercial system of the West or meet the fate which already had befallen India and China. Many of the ablest people were sent abroad, even before the coming of Perry and through the succeeding decades. This period included the Crimean War, the American Civil War, the unification of Germany and Italy, and the Franco-Prussian War. It saw the coming of the Bessemer process, the steam-propelled "iron-clad" and the growth of the railway systems. It saw the passage of the general incorporation laws and the beginning of big business. The more the Japanese learned, the more they were convinced that their only hope lay in adopting the new economy and applying it to national defense.

The rapidity and the thoroughness of Japan's change is due to the fact that this became a national goal toward which every Japanese, great and small, gave unremitting and loyal service. The Japanese people were an amalgam of several stocks and believed themselves to be of one race, descended from divine forefathers. The imperial ancestors and the reigning family "from ages eternal" were literally gods. This royal family provided a rallying center about which the whole nation could gather with patriotic, even religious, fervor.

Japan also had, in the samurai or knightly class (about one-sixth of the population), a universally recognized and well-trained group of leaders. Originally fighters and administrators for their feudal lords, when the lords' fiefs were surrendered to the central government under the Emporer in 1869, the samurai extended their loyalty, even intensified, to the person of the Emperor. This group of able leaders formulated and adopted this policy and convinced their fellow nationals that it should be carried out. Herein lay one of the fundamental differences between Japan and India or China. Neither of these countries had any group of able and aggressive leaders. In India the Brahmin priests were a gifted and highly trained group of intellectuals, while in China the government was administered by another group of scholars highly trained in classical Chinese culture. Neither group was in any sense able to formulate bold international policies, to force them upon the leaders, or to carry them into effect.

These samurai led both the political and the economic changes in the country; and their courageous, disciplined spirit permeated the entire movement. True to its past traditions, the government was authoritarian and it undertook a complete program of economic and military change. The government's aim and determination was to build up at whatever cost the material capital of an industrial, military, and naval power. For this it did not hesitate to reward successful business leaders. Like most nations on questions of defense, Japan looked to "big business" rather than small. Several well-established banker-trader-manufacturer groups had backed the new government in financial difficulties. They received favored treatment in this connection. Indeed, some of the most famed feudal capitalist combines laid their foundations at this time.

But the government also sacrificed ruthlessly the only other resources it had—cheap and abundant labor and small intensive agriculture. It allowed redundant labor to find its own price level at its near-starvation, marginal productivity, on the tiny plots of poor land; and it drew the revenue to build the new equipment very largely from taxes on agricultural land. An economist might say that they were sacrificing those resources which had the lowest marginal significance (labor) in order to acquire that one which had such marked importance and of which they possessed so little that its marginal significance was very great (heavy industrial capital). This explanation would not apply so clearly to the fact that they sacrificed the agricultural interest; this was done not because the country possessed great agricultural resources (as it did of labor) but because, in spite of the fact that its agricultural resources were extremely limited, they were almost the only ones which the country possessed.

Why did this great new industrialization occur in Japan rather than in some of the other countries of Asia? It appears to be due to the fact that in no other region were conditions so favorable as those of Japan. These conditions were primarily cultural but in part they grew out of the geographical situation. Japan was a small island country of about the area of California and her population was about equal to that of the United Kingdom at the time. This allowed the development of a single distinct and unified culture and made Japan a real nation. Indeed no East Asiatic group was either so clearly set apart or so consciously a separate nation as were the Japanese. Furthermore, no other people had so serious and so clear cut a problem of national defense. Japan's island position made her far more vulnerable to attack than were the other continental countries.

Cultural conditions in the wide reaches of China and India also differed markedly from this. China was a country as large as Europe and its people and cultures were almost as diverse. "The concept of nationalism was as foreign to an educated Chinese of the last century as that of money once was to an American Indian,"[1] so says one student of oriental history. Similar conditions prevailed in India. A subcontinent, its people ranged between the extremes of white and black and had a series of languages and cultures hard to enumerate. Its two great religions were incompatible. The Hindus were divided into over a thousand castes and there was no such thing as a national character. Both these countries fell early prey, even before Japan's restoration, to the Occidentals whom the Japanese so greatly feared. India was taken over by the British, while China was cajoled and beaten into submission and occupied and divided up for residence and commercial exploitation by the group of imperialist Occidental nations. When after the terrible Taiping rebellion during the nineteenth century, her tottering dynasty fell, in 1911, she was overrun by war lords and has since undergone a long internecine struggle, besides a terrible invasion by the Japanese. Possibly (or probably) she has not yet become a nation, nor adopted an abiding national economic policy.

---

[1] E. Herbert Norman, *Japan's Emergence as a Modern State* (1940), p. 125 n. 55.

Japan's economically strategic location gave still further encouragement to her rapid change. She was located in the Pacific, on the obvious route between North America and the Asiatic mainland as well as athwart the line for shipping and trade clear around the Asiatic coast. Great Britain's position in the Atlantic 300 years earlier gave to her similar advantages over her more isolated, Continental contemporaries such as France, the Germanies, and Russia. As Japan advanced she was ideally located to become the center for manufacturing, shipping, trade, and finance in the entire Pacific basin.

U.K
&
Japan

Having determined on their own account to modernize, what were the chief techniques by which the Japanese went about acquiring these infant industries? The government being authoritarian, with a clear notion of what it wanted and why, had no scruples about "interfering" in economic affairs. Of course it did not accept the popular European doctrine of free trade. It might have been favorable to protective tariffs, but its home market was hardly worth protecting. Furthermore the powers against which Japan was building an industry checked her on that score. The most-favored-nation "unequal treaties" wrung from both China and Japan held rates on imports to Japan to almost nominal figures until 1911. Almost ever since then, wars, depression, and inflations have made tariffs of little use.

In the first place these methods were too slow. Japan wanted a whole complement of industries and that quickly. Owners of private wealth in all the Asiatic countries were extremely timid. Capital was very scarce and could be loaned at 10 or 20 per cent, or even more, and no one knew whether the new industries would succeed or not.

In all these principal Asiatic countries the economic changes were first largely in the nature of a commercial revolution. Many of their own raw materials and special products were being sold to other regions close at hand and also being sent abroad. At the same time factory-made goods from the Occident were being brought into the East. What with the improved transport and new foreign connections, "native" merchants were enjoying a thriving business. This tended to close off one of the most likely sources of investment in industrial capital. Merchants were doing so well in their almost revolutionized commerce, with which they were experienced, that they had little or no inclination to launch into such strange and untried fields as factory building and operation.

Generally the government chose some variety of very positive encouragement. Already the *Shogunate* and a few of the feudal lords were operating mines and had set up small ordnance factories, iron foundries, and shipbuilding yards. The central government soon acquired most of these, as well as ownership of all mineral deposits. These it began to operate, often with foreign experts, but some establishments were leased to private parties. The manufacture of war materials and naval vessels was kept even until 1945 under government ownership and operation. The government owned and operated the first railway and, while private enterprise was used for later railroads, the chief lines have been government owned and operated since 1906. The same is true of telegraphs and telephones. ✓

While the government's chief determination was to create heavy industry as the basis for a military and naval establishment, it also planned a completely industrialized state. This was needed to support an increased population and all the material and financial power necessary to an independent nation. From what we know of the Japanese now it may seem a little surprising that the entire project was not taken over under government ownership and control. But at that time only two men, Marx and Engels, had mentioned such a possibility and the Japanese probably did not hear about that. In fact they seem to have accepted fairly readily the system of private investment which they found at work in Europe and America; but they worked out a very practical compromise which included government leadership. The government took the original risk because it was convinced that Japanese people could learn to do whatever the Occidentals could do. It bought the original plant for a great variety of nonmilitary industries and carried them through the experimental stages. When managers and workers had acquired the necessary skills, the projects were then offered to Japanese investors, often at very reasonable prices. The significant fact is that the government took the initiative. Indeed, before it asked the native capitalist to put up his money, it purchased and set up the necessary plant and began its operation, generally with foreign supervision but with Japanese labor. When it had been demonstrated that the Japanese could perform the processes and that the establishment could earn profits, the government offered to sell out to private parties, often at very reasonable rates. This early cases, new large holdings were fashioned out of public domain. Lands which had remained public property because they had not been worth exploiting now appeared attractive to private owners. Titles were acquired in a variety of ways. Some were outright gifts from a government inclined to be generous with persons of power and prestige, some were purchased for cash, others were given as compensation for military services, while still others were considered as payment for undertaking the survey of public lands. In some cases, too, large grants were made to individuals or companies for colonization purposes. Such grants presumably should have led to settlement by small farmers, but more often than not they led to additional land engrossment. Both Argentina and Mexico offer striking illustrations of the abuse of colonization land grants.

In some parts of Latin America, estates were enlarged or newly created after the middle of the nineteenth century by depriving Indian villages of lands which they had possessed since before the conquest and which they had managed to hold throughout the colonial period. The most striking development of this kind took place in Mexico during the thirty-five year rule of dictator Porfirio Díaz, when the Mexican government gave positive encouragement and assistance to the *hacendados* (estate owners) in stripping Indian villages of their customary lands.

In Bolivia, as in Mexico, many Indian communities lost their traditional landholdings in the latter part of the nineteenth century, and by roughly the same kinds of tactics and practices. Students of the Bolivian development have shown how the destruction of Indian community tenures followed the improvement in means of transportation, giving access to markets and thereby making such lands valuable to others. By 1921, when George McBride published his well-known study on agrarian conditions in Bolivia, the only Indian community lands left in the country were found in isolated and undesirable places. The desirable lands all had been taken away from the Indians during the preceding half-century.

Similar destruction of Indian tenures took place during the same period in Peru and Ecuador. In each country, geographic and institutional peculiarities affected the outcome, giving it a character of its own, but the broad result was the same in all cases. For example, in some of the Andean valleys the large holdings were tiny compared with the great *haciendas* of Mexico, but they were nevertheless large in relation to local topographic conditions, and they were created by means similar to those employed in Mexico.

Just as the system of large landholdings was extended after the middle of t[illegible] century, so did the system of peonage become more widespread. Both developments were fostered by the sam fundamental influence; that is, the expanding market economy. Th were opposite sides of the same coin. In some cases the encroachn on traditional Indian lands was motivated by a desire to get Indian labor rather than by a desire to have more land for cultivation. Deprived of the lands which had provided them with subsistence, the Indians had no alternative but to become peons for the owner of a nearby *latifundio*.

Furthermore, the bonds which kept the peon subservient to the landowner were tightened after the mid-nineteenth century, since his labor was now more essential than ever for the operation of the estate. If the average *latifundio* in Latin America did not become rationalized in technology, it did become more rational in the use of its labor force as the landowners came to appreciate the satisfactions of enlarged cash incomes. If the relation between landowner and peon continued to be a semifeudal one, the feudal quality of mutual privileges and obligations became clouded and distorted by the nominal wage-contractual relation between the two. The peon became firmly fixed in his status in the social system. The machinery for keeping the peon in debt was made more effective in some places by setting up stores at which he was required to make all his purchases. Control over the peon was extended by laws relating to employment and vagrancy and in other ways. The enforcement of these laws was sometimes carried out by extralegal and unconstitutional methods, but until recently Latin-American governments paid little attention to legal niceties when dealing with peonage.

The developments in peonage just summarized took place, of course, in the areas of Indian concentration. In other places where an expansion of commercial agriculture also occurred but where there were no substantial numbers of Indians to draw on, the need for a larger labor supply was met by immigration, with the immigrants coming in as farm laborers or tenants. The experience of Argentina in this connection is especially illuminating.

Argentina had an extremely local and undeveloped economy until about 1880. Thereafter, a rapid transition set in, and within a generation a remarkable transformation had taken place. By the time of the first World War, Argentina was a major supplier of meat and grain for world markets. Following the Hispanic-American tradition, as we have already observed, the system of large landholdings was continued and extended under the new commercial influences. But the expansion of grain production called for a much larger labor supply than had been required by the typical cattle ranch of the earlier period, and since Argentina was a sparsely popula[illegible]he additional nds required to till the soil were provided by immigration. Italians d Spaniards made up the bulk of the immigrants, coming in mostly as agricultural wage earners. Some of the Italians were merely seasonal workers who dovetailed employment in the harvesting of flax, wheat, and corn in the Southern Hemisphere with the cultivation of lands in their native Italy during the remainder of the year. These immigrants who came and went with the seasons in Argentina, just like their fellow Italians who migrated seasonally to France, were known as "the swallows."

The immigrants who settled down in Argentina rarely became landowners. Many started as farm laborers and remained permanently in that class. Others who started as farm laborers—perhaps the majority who did so—after a time became tenants. Still others were tenants from the beginning. Some of the tenants were cash renters; others were sharecroppers. But whatever the rental contract might have been, the tenant, with minor exceptions, remained a tenant and his sons also became tenants rather than owners. The large estates were not broken up to make way for independent farmers. Tenancy was an end, not a means, to a higher status.

It is not my intention to suggest that the tenancy which developed in Argentina—and which continues to this day—has had the same social and economic consequences as peonage in other parts of Latin America. Studies of agrarian history and conditions in Argentina, such as Carl Taylor's book, *Rural Life in Argentina,* show that many tenants have done reasonably well from the financial viewpoint, and that some have even become wealthy. Nevertheless, the obstacles to ownership have had serious results. The Argentine tenant, like tenants in many other countries, has had little security of tenure. The usual consequences of uncertain tenure have appeared. Tenants have been loath to make improvements on farms they may not be able to operate for more than one year, and they have shown little interest in better farming methods, such as crop diversification and conservation practices.

Even more important, perhaps, have been the intangible results of permanent tenancy. The aspiration to become a landowner is a deep-seated desire among the tenants of Argentina, as any number of studies show. This ambition has been frustrated for the vast majority of the rural population. Talents and abilities which could have been brought out have remained latent and unused. Surely, a dynamic quality has been lost to the Argentine economy as a consequence of the tenancy system.

In addition, in the long run, tenancy has made its contribution to political unrest and instability in Argentina, as in many other parts of the world. It is not the only factor, but it must bear some of th sponsibility. The upheavals that have taken place and the uncerta they have left in their wake obviously have been unfavorable to t economic development of Argentina.

Finally, it is reasonable to ask whether the Argentine system of landholdings did not prevent her from taking full advantage of the big wave of European emigration in the two generations prior to World War I. Given the size and quality of her agricultural resources, Argentina could have been expected to recruit more than the 3,700,000 immigrants who reached her shores during that period. It is true that Argentina was second only to the United States as an immigration country, but she was a pretty poor second, because in the same period about six times as many immigrants entered the United States. Moreover, those who went to Argentina were less permanent. Argentine migration statistics show that approximately 45 per cent of the immigrants returned to their native lands, while re-emigration from the United States is estimated at only 30 per cent. We know that many of the immigrants who went to Argentina expected to set up farms of their own, and that they were encouraged in this belief by numerous so-called "colonization" projects. Disappointment was often followed by re-emigration. If Argentina had been able to provide greater opportunity for independent farmers, her immigrant population would have been more permanent as well as more numerous.

If time permitted, a similar analysis could be made of the immigration experience of Brazil—the second immigration country of Latin America. It would differ from the Argentine case in certain important details. Tenancy, for example, has been less common in Brazil over the whole period since the middle of the nineteenth century, and the growth of tenancy in the last thirty years has involved a movement up the social ladder from farm laborer to tenant. Thus the typical Brazilian tenant does not seem to sense the land hunger which is felt so keenly by the farm tenant in Argentina. In spite of such differences, however, the same broad conclusion holds for Brazil as for Argentina. Neither country attracted as many immigrants as its agricultural resources would warrant; neither country benefited from European emigration nearly as much as it might have.

If Argentina and Brazil were only moderately attractive to the European of small means seeking an opportunity to better himself, the countries where peonage prevailed were even less so. Such countries were repellent to potential immigrants, who saw little prospect for advancement in a community of landlords and serfs. Thus other Latin-American nations profited even less than Argentina and Brazil from the accumulated knowledge, skills, and labor power which Europeans took with them when they emigrated overseas.

Just as the countries of Latin America failed to make the most of international migration after 1850, so did they fail to make the most of the opportunities which technical improvements and an expanding world economy afforded for attaining higher average standards of living. The fundamental barriers to material progress in Latin America were institutional. Latin America remained a semifeudal society, with all the trappings thereof. The landed aristocracy, all-powerful in political and military affairs, exerted also the decisive influence in economic affairs.

The members of this favored class indulged, as one would expect, in conspicuous consumption. They invested readily in land, since it was socially the most respectable thing to do; and since they typically spent a good deal of time abroad, they were prone to keep funds outside the country and to hold foreign securities. No one knows how much capital has been exported from Latin America, but for "capital poor" countries it probably has been a substantial sum. Real property apart, the landed families of Latin America have had little interest in domestic investment. Small wonder, therefore, that it was mostly foreign capital, not domestic, which developed transportation, commerce, and mineral production in Latin America in the late nineteenth century and early part of the twentieth.

What has gone before is an analysis of basic institutions established in colonial Latin America and of the way in which these institutions were refined by the course of economic development after the middle of the nineteenth century. In many parts of Latin America they remain intact to this day. In some countries, developments of the last twenty-five years or so suggest that far-reaching changes are beginning to take place. These developments, representing a trend toward economic diversification in general and industrialization in particular, were accelerated during World War II. The heritage of the past, however, is not easily written off. The most serious economic problems which plague these countries nowadays are precisely those which come out of the long, semifeudal past.

To illustrate these problems—which is all that can be done in this paper without going afield from the main theme—I may call attention to the limited size of the internal market now found in Latin-American countries. A broad middle-class market is lacking. The depressed rural population offers few customers for the output of new factories. There are, of course, many steps which can be taken to raise rural buying power, but they are not likely to mean much unless accompanied by a land reform program. Even after a substantial amount of land reform has been accomplished, the restraining effects of the past make themselves felt in the lack of education, subservience to traditional methods of farming, the tendency to raise subsistence crops, poor health and sanitary conditions which impede efficient work, and so on. The experience of Mexico—the one country in Latin America which has out a land reform program—is illuminating in this connectio granting that the Mexican case has been influenced by special conc which need not prevail elsewhere.

Other illustrations of the influence of past conditions can be found in the difficulties of adjusting to the work habits required in modern industry and in acquiring a sense of responsibility about spending cash income. Here I need only point out the well-nigh universal complaint from factory owners in Latin America that they are unable to get suitable foremen and also that their absentee and turnover rates are extremely high. Similar obstacles to economic development appear today in the mobilization of capital resources. The preference for investing in land, as we have observed, and the habit of keeping funds abroad are both results of the long experience of a feudal nature in Latin America.

II

If we turn now to the United States, the early history of the British mainland colonies shows that attempts were made in some places to establish a system of landholdings and social classes resembling the surviving feudal forms in England at that time. These attempts failed, except in the South. This exception will be dealt with rather fully later, since it is illuminating with respect to the theme of this paper.

Granting that the impulse to establish relic feudal forms was found in the English colonies as well as in the Spanish and Portuguese, it must be recognized that it was weaker in the English case than in the others. The English economy at the end of the sixteenth century was much more diversified than the Spanish. Feudal remnants persisted, but they were not dominant as in Spain. Trade and industry were not only more developed but were more respectable socially. Merchants who had acquired wealth were becoming landowners and were getting incorporated into the landed aristocracy, thus weakening the feudal outlook of the old landed families. The scale of social values transplanted to the English colonies, therefore, was less rigid than the Spanish. The ownership of land was less important, and it soon became possible for a merchant in the English colonies to enjoy top social distinction without being a landowner at all. The difference in degree between the English and Spanish attitudes toward land ownership was not by itself decisive in bringing about a different course of economic and social olution in the two sets of colonies, but it did assume importance in mbination with other conditions.

Among these other conditions was the character of the Indian civilizations found in the area of Spanish conquest. In some places—notably Mexico, Guatemala, and the Andean country—the Spaniards came upon dense concentrations of aborigines, living in villages and towns, cultivating crops such as corn, beans, squash, and potatoes, and trained to perform a variety of craft and construction tasks. Once conquered, they could easily be parceled out and forced to work for their European masters—all the more easily because they were accustomed to working under compulsion for their own chieftains in the days before the conquest. In other parts of the Spanish dominions there were no great concentrations of Indians, but mostly the natives were sufficiently sedentary so that they could be captured and put to work. Later, if necessary, they were supplemented or replaced by Negro slaves. Throughout the Hispanic New World, in spite of some exceptions, it is clear that aboriginal conditions lent themselves to creating a laboring population of servile character, thus facilitating the introduction of feudal institutions.

In British North America, there were no densely-settled Indians like those of central Mexico or Peru. The will to take advantage of Indian labor was possibly not as universal among the early English colonists as among the Spanish and Portuguese, but certainly it was not lacking. Attempts were made, by Puritan groups as well as others, to captivate natives and enslave them. These efforts, however, were rarely successful. By stubborn fighting and by taking to flight, the Indians resisted being put to work by the white settlers. They were exterminated or they were driven back, but they could not be converted into a permanent servile population.

Geographic conditions also influenced the institutions which Europeans established in their colonial possessions of the New World. The tropical climate found in much of Hispanic America favored the production of sugar for export to Europe. Raising and processing of sugar cane could be done on a large scale using relatively large amounts of labor, and thus the use of Indian serfs or Negro slaves was encouraged. Other tropical and semitropical export crops of colonial Latin America, such as cacao, indigo, and cotton, had similar labor requirements and were also cultivated by unfree workers. In addition, the great discoveries of precious metals in the Spanish colonies caused thousands of Indians to render forced labor in the mines.

In British North America, except in the South, climatic conditions made it impossible to raise export crops calling for large amounts of labor. Similarly, during the early period there were no big strikes of gold and silver which might have led to widespread use of slaves mining.

The three factors I have mentioned—namely, the weaker English impulse to introduce feudal institutions, different Indian civilizations and different geographic conditions—adequately account for the difference between the social system established in the British mainland colonies and that of colonial Hispanic America.[1] The difference became apparent early. Subsequently, cumulative developments in each area tended to magnify the difference. Thus migration to the British colonies took on a selective character. Those who were most dissatisfied with aristocratic privilege at home and who were enterprising enough to pull up stakes and risk a new life across the Atlantic responded readily to the urge to migrate, especially to the northern and middle colonies. Yeoman farmers, artisans, and urban petty *bourgeoisie,* all of whom were prominent in the immigrant stream, gave additional strength to the social, economic, and political institutions already taking root in this part of the American continent.

The system of small landholdings which took hold during the colonial period was continued and extended after independence through the disposal of public domain by the federal government. It is well known that the public land policy was fraught with errors of judgment, shattered ideals, corruption, inadequate protection of the public interest in mineral and timber resources, and so on. Speculative interests were often benefited at the expense of settlers. In some places the method of disposing of public lands resulted in tenancy rather than ownership of small farms. These and other criticisms have justly been made of the public land policy by many writers. Nevertheless, the recognition of pre-emption rights and also the Homestead Act, in spite of numerous drawbacks, gave continued scope for the establishment of small holdings during the nineteenth century. The pattern of landholdings in this country was created before the national period of our history began, but the public land policy deserves credit as a means of extending this basic landholding system.

The wide distribution of land ownership in the United States epitomizes the dominant middle-class character of American social organization. If, as many have pointed out, there were cultural drawbacks to this kind of society, there were also well-known advantages of a material nature, expressing themselves in the economic development of the nation and in comparatively high average standards of living. The broad middle-class market in this country was a potent force in the development of mass production methods in manufacturing. As industry advanced after the Civil War, it found right at hand a mass market. Other factors, to be sure, played a part in creating this mass market. Highly productive resources certainly were important. Nevertheless, if the social organization here had been like that of Latin America, with a similar distribution of ownership of land and other resources, it is inconceivable that this country could have had a mass market. Under such conditions the rate of industrial development would have been greatly retarded.

---

[1] Clarence Haring has an illuminating discussion of this question in his synthetic account of Spanish colonization in the New World, entitled *The Spanish Empire in America* (New York, 1947).

We should also call to mind some of the advantages which this country enjoyed because there were no important social obstacles to the pursuit of opportunity and the acquisition of wealth. Birth and social position did not determine the outcome of a man's career regardless of other qualities. Those born to wealth doubtless had advantages over others, but the others were not faced with social barriers which made it impossible for them to move upward in the income scale. Thus it was the United States, above all, that Europeans regarded as the land of opportunity, and it is not surprising that migration across the north Atlantic overshadowed by far all other movements of population in the period of great overseas migrations prior to World War I.

Just as the social system of the United States attracted immigrants, adding their manpower and skills to the productive capacity of the country, so must it have served to bring out the energies and latent talents of those who were already here. In Latin America, the depressed peon, with no prospect of betterment, was hardly to be blamed for schooling himself in ways of getting back at his master by slowing down in his work and shrugging off responsibility. The habits of mind and the kinds of behavior ingrained in a people by four centuries of serfdom and peonage are bound to cling tenaciously, and there is no question but that they constitute a stubborn handicap to the efforts now being made in Latin America to industrialize and to improve production in other ways as well.

The emphasis given in this paper to social organization and the related system of landholdings finds additional support in the economic history of our own South. Climate and soil early made it possible for tidewater Maryland and Virginia to become a center of tobacco production, and favorable natural conditions led to the raising of rice and indigo farther south along the coastal strip of the Carolinas and Georgia. All three crops found a ready market in Europe, and all three could be raised profitably with the use of comparatively large amounts of labor. Thus the plantation and Negro slavery became characteristic institutions of the South during colonial times. In the nineteenth century, the same system of production, with its attendant social structure, became attached to cotton raising, spreading widely through the tier of southern states.

The ante-bellum plantation system of the South resembled the *latifundia* of Latin America. The two were not precisely identical. Nevertheless, they matched each other at critical points, and the similarity between the South and Latin America was far greater than between South and North in this country. To be sure, there were many small independent farms in the South. Most of these, however, were subsistence farms located in the poorer areas. Where good soils and good location combined to make an area attractive for agricultural development, such as along the Mississippi and its tributaries, the small farmer could not share the opportunities enjoyed by the typical Northern farmer. By and large, the small farmers of the South were a depressed class.

The planter aristocracy, differentiated sharply from the small white farmers as well as from the Negro slaves, betrayed characteristics similar to those of the landed families of Latin America. They were famous for gracious hospitality and other kinds of conspicuous consumption. Social considerations made them interested in investing in land and in slaves, rarely in anything else. There were individual exceptions, of course, but the planters as a whole regarded commerce and industry as beneath the dignity of a gentleman and as a threat to a way of life that had aesthetic and enduring social values of its own.

If there was a tendency to monoculture and one-sided economic development in the South inherent in the advantages of specializing in cotton production, surely this tendency was greatly exaggerated by the social and landholding system. The South, I venture to say, could have produced just about as much cotton as it did even if it had had a more diversified economy. There is every reason to believe that the South would have attracted European immigrants if it had not been populated mainly by Negro slaves and subsistence farmers. Under different social conditions, there would have been more capital rather than less available for economic activities other than cotton raising. As it was, it is not surprising that when the Civil War broke out the South was far behind the North in the building of a railroad network and even farther behind in manufacturing development.

The tenacity of Southern institutions is shown by the course of development after the Civil War. The abolition of slavery did not do away with the plantation system, but led rather to a variation in form. The slave was replaced by the tenant, especially the sharecropper, and peonage became a characteristic feature of the Southern agrarian structure. In this respect, as in others, there was a close parallel to the experience of Latin America, where the course of evolution ran from Indian serfdom to peonage. Furthermore, tenancy in the South was a permanent status rather than a step toward ownership. This feature, too, offered a parallel with Latin America and a contrast with the remainder of the United States.

As industry began to develop in the South after the Civil War, earlier institutions made their influence felt in the establishment of mill villages and in paternalism. True, these developments were favored by circumstances arising out of the war itself, as Broadus Mitchell has pointed out in his volume on *The Industrial Revolution in the South;* but they were also an outgrowth of the depressed condition and lack of education of the subsistence farmers who made up the bulk of the wage-earning class in the new textile mills. Here again, an interesting parallel can be drawn with Latin America, where numerous cases of paternalism have been found in the new industrial developments of recent years. There was, to be sure, some paternalism in the early development of cotton mills in New England, but it was of short duration, and it did not spread to other industries and other areas of industrial development in the North. In the South, although paternalism may be dying out nowadays, it has shown a strong tendency to persist. We may expect a similar tendency, probably a stronger one, wherever paternalism has appeared in the new industrial structure of Latin America.

In what has gone before, I have stressed the parallel development of socioeconomic institutions in Latin America and in the South of the United States. This emphasis was not intended to suggest that the two regions have had an identical historical experience. There have been many elements of difference, such as the profound influence which the Catholic Church has had upon Latin-American culture and attitudes. But in spite of such differences, the similarities have been striking. Both areas show the effects of a semifeudal social and landholding system in restraining economic development in modern times, and both show how stubborn such institutions are in loosening their grip.

III

One principal question remains to be considered in relation to the theme of this paper; namely, the effect of natural resources and other physical conditions upon the comparative levels of economic development of the United States and Latin America.

No country in Latin America has had such a fine combination of physical resources and conditions to work with as the United States. Such a comparison, of course, allows for wide variations among the Latin-American nations. Some come much closer than others to approximating the benign natural conditions of the United States. In this respect, Brazil is noteworthy. Brazil is a large country—larger than our forty-eight states—and it possesses much good agricultural land, rich forest resources, and a host of mineral deposits. In iron Brazil is especially fortunate. It is generally agreed that Brazil has the largest reserves of high-grade iron ore in the world. In two important ways, however, natural conditions in Brazil have been less favorable for economic development than those of the United States. One is the comparatively large amount of area where tropical conditions prevail and where settlement and agricultural development are handicapped by high temperatures, heavy rainfall, dense native vegetation, leached soils, and energy-sapping diseases. In the second place, Brazil is poor in coal. She has some coal deposits in the southern part of the country, but they are geographically far removed from the iron reserves and they are also low-grade as to quality.

In spite of these natural shortcomings, Brazil must be considered a country with rich natural resources. Although not so well endowed as the United States, there is every reason to believe that so far as resources are concerned Brazil could have attained a much higher level of economic development than it has. If it be argued that the development of industry has been thwarted by the lack of good coal, it may be pointed out that Brazil could have accomplished much more than she has with her agricultural resources. The difference in resource base cannot account for the great difference in material development and standards of living between Brazil and the United States.

Brazil, to be sure, is better equipped with natural resources than any other country in Latin America. The physical advantages of the United States, therefore, are more important in comparison with the other countries than with Brazil. In some cases the advantages are extremely great.

Nevertheless, I believe that the institutional factors dealt with in this paper have had a more powerful and far-reaching influence than resources in causing the wide divergence in rates of economic development between the United States and Latin America as a whole. It is well to call to mind, in this connection, what Switzerland and the Scandinavian nations have achieved with natural resources inferior to those of many countries in Latin America. We should remind ourselves, too, of our own South, which has a good endowment of soil and mineral resources. If resource conditions were the dominant factor, it would be difficult to explain why economic development in the South has been sluggish compared with other parts of the United States. Granted that Latin-American countries have suffered from natural handicaps which are difficult to overcome, the gap between possibility and achievement has been a huge one. Under different institutional onditions, resource deficiencies of individual countries could have been etter made up by international commerce, including trade among the Latin-American nations as a group. Similarly, some natural impediments to economic development, such as those affecting agriculture and transportation, could have been overcome by a greater application of modern technology and scientific knowledge if it had not been for the institutional barriers inherent in the semifeudal social and landholding system of Latin America.

These institutional barriers to economic progress, as pointed out earlier, are found in Latin America today, as in the past. They are, however, more important in some countries than in others; and in drawing this paper to a close, I should like to insist on the need for studying and evaluating the tenacity of semifeudal institutions in individual countries, if we are to have an understanding of the problems of economic development in the Latin-American nations. Such studies are not only of academic value, but they are necessary for a wholesome program of economic assistance, whether under the Point Four label or any other. They cannot, to be sure, guarantee a successful program, but they are indispensable if errors of judgment, sacrifices, and pains of readjustment are to be kept to a minimum.

THE SOUTHEAST: A CASE STUDY IN DELAYED INDUSTRIALIZATION

By John V. Van Sickle
Wabash College

The diffusion of private capitalism to date has widened international differences in levels of living. The gap between the Chinese coolie and the English tenant farmer was undoubtedly less marked in 1750 than in 1950. This outcome of 200 years of capitalistic development runs counter to what traditional economic theory would lead us to expect.

Time limitations and the competence of this audience make it unnecessary for me to elaborate on the orthodox views regarding the leveling effects of international movements of goods, labor, and capital on factoral rewards and levels of living in widely separated areas.

The failure of private capitalism to accomplish this leveling effect is due in part to the inability or unwillingness of men to move and in part to the refusal of governments to permit freedom of trade in the widest sense. But more important, probably, is the fact that private capitalism—as a way of life as well as a method of production—penetrates noncapitalistic societies at very different rates of speed.

The penetration is relatively easy if the people with a primitive technology want the products of a more advanced technology sufficiently to adopt the folkways or social values that go with the advanced technology. Among these social values are discontent with the existing culture pattern, virtually insatiable desires for the material products of the machine, willingness to work according to the requirements of the machine, and willingness to accept individual responsibility. Individualism and voluntarism are essential ingredients of a vigorous private enterprise system. Private enterprise can enter any society where these characteristics exist.

Deeply rooted noncapitalistic folkways destroy the basis for the operation of the peaceful *quid pro quo* principle of the private enterprise system. Economic imperialism represents violent penetration. The businessmen of a country with an advanced technology invoke the political power of their government to gain access to valuable resources in noncapitalistic societies which the inhabitants are unable or unwilling to develop and offer in peaceful exchange.

Imperialism raises a nice question of ethics. Does the right of prior occupancy justify a people in locking up indefinitely resources which can contribute greatly to the welfare of people everywhere? It is not my task to explore this important issue; my assignment is concerned with regional differences in rates of economic progress within the United States.

I should perhaps state here that I am treating industrialization as synonymous with economic progress in the case of an area as extensive, as heavily populated, and as poorly endowed with natural resources, particularly agricultural land, as the southeastern part of the United States.

The Old South provides an interesting example of a delayed but successful penetration of modern capitalism into a relatively backward agrarian economy. I propose to identify the forces within the region which worked for and against the penetration, and then to note the outside reactions to this development.

Before describing the processes of penetration it is worth noting that the Southeast is part of a national economy in which there is a closer approximation to the prerequisites of laissez faire capitalism than is to be found anywhere else in the world. Free trade prevails throughout the national area. Men are free to move from one part of the country to another in search of opportunity, retaining always their national citizenship and guaranteed the rights of local citizenship wherever they choose to settle. There are no serious religious or linquistic barriers. Education is publicly supported in every state of the Union. There are no legal barriers to capital movements and no serious differences in the kind and degree of legal protection accorded to property rights in the several states. The folkways are predominantly capitalistic in all parts of the country.

In view of these favorable underlying conditions one would expect that the equalizing tendencies inherent in a vigorous, and, on the whole competitive, capitalism would by this time have eliminated gross regional differences in levels of living. In fact surprisingly great differences still exist.

Before attempting to explain the reasons for the persistence of these differentials, it may not be out of place to suggest that a study of the economic progress of the Old South and of the resistances which that progress has provoked in other parts of the country has international as well as domestic implications. It should impose caution upon those who want the American government to direct the resources of the American people to the abolition of poverty throughout the free world. The task is immeasurably greater than that of eliminating poverty in the South. Harm rather than good will come from promising more than we can deliver. I have an uneasy feeling that many of the international commitments which we have already accepted, or which we are being urged to accept, are unwise in the sense that they arouse excessive expectations. I do not believe that we can meet the communist challenge by promising more than we can deliver or will deliver and more than many backward peoples can assimilate.

The Poverty of the Old South

Since well before the Civil War the vast majority of the people in the Old South were poor by comparison with the people of New England and the Middle Atlantic States. For our purpose it suffices to note the situation as it existed two generations after the termination of that conflict. In 1929 the average per capita income in the Southeast was hardly half that for the country as a whole, and only 37 per cent of that in the old industrial Middle East. (See table below.)

How are we to account for the persistence of such a differential within a single free-trade market? Obviously there were unfavorable factors in the situation which offset the favorable ones mentioned earlier.

Factors Responsible for Southern Poverty. In a *Study of Agricultural and Economic Problems of the Cotton Belt,*[1] a group of economists from southern universities and from federal bureaus listed the following ten factors as primarily responsible for the failure of the Cotton South to attain economic parity with the other principal regions of the United States: (1) low productivity of manpower in southern agriculture; (2) the exceptionally high rate of natural increase of the southern farm population; (3) the past and continuing high rate of soil erosion and soil depletion; (4) lack of capital; (5) educational deficiencies; (6) health deficiencies; (7) lack of skills for nonfarm pursuits; (8) the South's infant industry status; (9) inadequate local market demand; (10) adjustments required by increased rate of farm mechanization.

The Regional Pattern of Factoral Rewards. These adverse conditions produced the effects on factoral rewards which orthodox economic theory would lead us to expect. Interest rates were substantially higher than those prevailing in other parts of the country. The rent component in the low regional income was relatively high, but the low fertility of most of the southern soils and the absence of large cities resulted in land values and rents which were lower than in the more urbanized and industrialized parts of the country. Wages were very low for agricultural workers and for the unskilled generally. The relative scarcity of semiskilled and skilled workers resulted in a substantially larger spread in the differentials above the industrial common labor rate than was to be found in the highly industrialized regions.

In 1940, 58 per cent of the employed in the Southeast and in the Middle States were classified as skilled, semiskilled, and unskilled, but the breakdowns were very different. In the Southeast 13.7 per cent were classified as skilled, 29.3 per cent as semiskilled, and 57 per cent as unskilled. In the Middle States the corresponding percentages were 22.4,

---

[1] *Hearings before Special Subcommittee on Cotton of the Committee on Agriculture,* House of Representatives, 80th Cong., 1st sess. (Government Printing Office, 1947), p. 506.

43.1, and 34.5.[2] These differentials resulted in the very pronounced differences in the structure of wages in the two regions to which reference was just made. The wage rates for common and semiskilled labor in the Old South were very low. Moreover, the existence of a very large number of prolific farm families with annual earnings even lower than those of the families of unskilled nonfarm workers meant that a substantial expansion of industrial employment could occur without the necessity of any appreciable rise in the unskilled and semiskilled labor rates. Southern firms, on the other hand, frequently paid higher wages for skilled labor than did their competitors in the older industrial regions. A further point is to be noted. Southern industrial wages were substantially closer to those prevailing in the industrial regions than southern per capita income was to per capita income in the industrial regions. This indicated that in terms of locally available alternatives, the South's industrial workers were relatively well paid, however inadequate their incomes appeared to be when compared with those of industrial workers in other areas.

Factoral Rewards and Regional Adaptations. Once the South had recovered from the destruction wrought by the Civil War and the demoralization of defeat, reconstruction, and military occupation, the above pattern of factoral rewards set in motion the expected equalizing adaptations. An outmovement of population took place in every decade, rising and falling with general business conditions. In decades of generally good business, the rate of growth of the population of the eleven states of the Southeast, despite very high net fertility rates, lagged behind the national rate of growth by from 26 to 33 per cent. In the depression decades of the seventies and the thirties, the regional rate of growth exceeded the national rate by 18 per cent and 47 per cent, respectively. In the prosperous twenties more than a million and a half people left the region in search of more favorable opportunities elsewhere. Countering this exodus of people was a slow and irregular increase in the volume of nonregional capital entering the area in search of profitable investment opportunities.

Southern industrialization proceeded according to expectations. The new industries which established themselves in the South were those which could take advantage of the region's raw materials and its abundance of relatively low-paid unskilled and semiskilled labor. The industries of the South were typically low value-added industries. In 1939 the value added per wage earner in the industries of the eight states of the Middle West centering around Indiana was 53 per cent higher than in thirteen cotton states.[3]

---

[2] From data compiled by McGraw-Hill Economics Department and published in *Business Week* during 1947.

[3] *Hearings before Special Subcommittee on Cotton,* p. 691.

The diffusion of capitalism widens geographical differentials in levels of living as long as people in areas of advanced capitalism increase their equipment per worker and improve their organization faster than people in less developed areas. Up until the turn of the century—and perhaps up to the end of the twenties—this may well have been the case in the United States. Thus the National Resources Committee noted, in *Problems of a Changing Population* (page 68), that the share of total industrial wages paid by firms in the eleven old and established industrial states increased from 75 per cent to 82 per cent in the thirty-year period from 1899 to 1929 and concluded, in accordance with the analysis in *Migration and Economic Opportunity*[4] (a co-operation study under the direction of Carter Goodrich), that this was the natural pattern, based on the principle of comparative advantage. It predicted that in the future, as in the past, the nonindustrial parts of the country would adapt themselves to this pattern. A considerable part of the population surpluses in the agrarian parts of the country would find employment in "the industrial belt" and a portion of the surplus savings of that region would flow out to finance the improvement of agriculture and the exploitation of the natural resources of the feeder regions.

This thesis has been sharply challenged. Even the data presented in *Problems of a Changing Population* (Table 7, page 68) permit a different interpretation. Thus between 1919 and 1933 the Southeast's share of wage jobs rose by 34 per cent, in contrast with a decline of 8.4 per cent for the Northeast and an insignificant increase for the Middle States (0.4 per cent). The census figures for 1937 led Professor Spengler[5] to predict that "a considerable proportion of such future manufacturing as takes place in the United States will take place . . . in the Southeast." He based this prediction on the fact that in the period 1899 to 1937 his southeastern region increased its percentage of wage jobs from 6.2 to 11.5 while every other region, except Louisiana-Texas (which he treated as distinct from the Southeast) lost ground. The developments of the next thirteen years have confirmed the fact that the old industrial pattern is breaking up and that the Old South is catching up. A McGraw-Hill study which appeared in *Business Week* (August 7, 1948) showed that industrial migration occurred on a larger scale than ever before in the period 1939 to 1947, and that the Southeast, the Southwest, and the Far West were the only regions to make relative gains.

The over-all effect of this rapid penetration of modern capitalism into the Southeast has been to narrow dramatically differences in regional levels of living as measured by regional per capita income figures. The data in the following table reveal the extent of the change in the period 1929 to 1947.

---

[4] University of Pennsylvania Press, 1936.

[5] J. J. Spengler, "Regional Differences and the Future of Manufacturing in the United States," *Southern Economic Journal*, April, 1941, p. 488.

During this eighteen year period the Southwest, the Southeast, and the Northwest registered relative gains of 21, 31, and 32 per cent, respectively. All three regions are still relatively agrarian and all have benefited by the striking improvement in agricultural prices. It is significant, however, that the population of the Northwest increased by only 1 per cent in this period while the other two regions registered population gains roughly the same as the 18 per cent registered for the country as a whole. The Northwest thus improved its relative position primarily through a population adjustment, whereas the agrarian states of the South improved theirs primarily through a speeding up of the rate of capital formation.

PER CAPITA INCOMES BY REGIONS, 1929 AND 1947

STATE AND REGION	AMOUNT IN DOLLARS		AS PERCENTAGE OF NATIONAL PER CAPITA INCOME	
	1929	1947	1929	1947
Continental U.S.A.	680	1,323	100	100
New England	838	1,444	123	109
Middle East	926	1,559	136	118
Central	720	1,391	106	105
Northwest	534	1,373	79	104
Far West	865	1,559	127	118
Southeast	344	883	51	67
Southwest	464	1,081	68	82

Source: *Survey of Current Business,* U. S. Department of Commerce, September, 1948, p. 17.

Figures for later years will undoubtedly show that this equalization process is still going forward. Nonetheless, the Old South is still inadequately supplied with artificial capital and the industrial revolution going on in agriculture there, as in other parts of the country, requires a very rapid increase in capital if the workers being displaced from the farms of the South are to find near-at-hand employment and are to be as well backed with capital as nonfarm workers in other parts of the country.

Reactions to Southern Economic Progress

In the balance of this paper I propose to examine the reactions of other regions to the successful penetration of capitalism into the bankrupt and semifeudal agrarian economy of the South as it prevailed at the close of the Civil War.

As long as industrialization proceeded in the South no more rapidly than in the older and established industrial regions no difficulties arose. But with the onset of the Great Depression the expansion of industrial wage jobs in the South took on another mien. With wage jobs contracting in the older industrial regions, it was not unnatural for management and labor alike to feel that they were being subjected to unfair competition. The cry arose that the South was profiting through the exploitation of its workers. As the depression dragged on and as groups became more and more accustomed to looking to Washington for help, what could be more natural than to demand of Washington a magic formula whereby the development of the South could go forward in ways less painful to its neighbors.

Since the progress of the South depended so heavily on its wage advantage, the formula would have to withdraw this advantage. The NRA codes represented the first experiment in the fiat narrowing of regional differences in wages. After the demise of the NRA the hastily passed Walsh-Healey Public Contracts Act of 1936 was used to prevent southern firms from bidding on government contracts in excess of $10,000 unless their wage scales came up to the industry-wide or near industry-wide standards determined by the Administrator. The method of determination invariably fixed the minimum well above the rates currently being paid by southern firms, except in cases where the industry was already concentrated in the South. The Fair Labor Standards Act of 1938 carried the attack still further. It prohibited firms from engaging in interstate commerce unless their entrance rates measured up to a minimum which took no account of regional or size of city differentials. The Wagner Act had as one of its purposes the encouragement of collective bargaining in the South. It was hoped that the unions would thus take over the task which had had to be dropped when the NRA was declared unconstitutional.

As an offset to these measures, which reduced the capacity of the South to attract outside risk capital, the formula called for the injection into the southern economy of public funds to be secured in part through the banks by deficit financing and in part through taxes with a predominantly non-southern regional incidence. The injection occurred through generous agricultural aids, social security grants, TVA, and public works generally. Sharp increases in the corporation tax and in the rates and progression of the personal income tax protected the South from the risk of having to pay in full for these subsidies.

These were the principal elements in the magic formula. That it played hob with the principle of federalism passed almost unnoticed and was regretted only by a few old-fashioned persons who saw in federalism an indispensable means of reconciling sectional and international conflicts of interest.

The federal full employment bill of 1945 marked the logical culmination of these separate efforts to help all parts of the country. It attempted to write the magic formula into a single law. It imposed upon the President the obligation to recommend, if all else failed, the volume of spending required to create conditions such that "all Americans able to work and seeking work," including agricultural workers and domestic servants, should be able to find "useful, remunerative, regular and full-time employment." The adjective "remunerative" was not defined, but it seems probable that the Administration would have urged at least the minimum as it stood in the Fair Labor Standards Act, as far as common labor was concerned, if not the still higher rates set by the Administrator of the Fair Labor Standards Act in his capacity as Administrator of the Walsh-Healey Act.

In the same legislative hopper with the full employment bill was a bill to raise the minimum under the Fair Labor Standards Act to 65 cents and eventually to 75 cents an hour. At the time only a small minority of southern workers were getting as much as 65 cents an hour and these were largely concentrated in the export industries of the several states.[6] Under these circumstances, if the President and the Congress were really prepared to carry out the spirit of the law, it would have been necessary to declare that the bulk of the working population in the South were not "remuneratively" employed and to have expanded federal spending there to the level that would have made it impossible for private firms in agriculture and in intra- and interstate trade to hire workers for less than 65 cents an hour (or whatever higher rates the Administrator of the Walsh-Healey Act found to be the prevailing rates in the various industries making up the American economy).

Neither the full employment bill nor the bill to amend the Fair Labor Standards Act got through the Eightieth Congress. A 75 cent amendment was passed later and a revised Employment Act of 1946 contains all the essentials of a full employment program and can be implemented according to the original design, if an Administration and a like-minded Congress so desire.[7]

If we persist in trying to implement this magic formula[8] for fitting the dynamic and expanding industrial South into the national economy three disquieting consequences may be anticipated.

1. We shall create a South with a disproportionate part of its workers employed by government agencies. The federal government will have to finance the jobs because of the fallacious idea that all people in the South are entitled, as a right, to a minimum level of living and that they should not work for hire for any firm that is unable

---

[6] For data on Tennessee in 1945 see my "Geographical Aspects of a Minimum Wage," *Harvard Business Review*, Spring, 1946.

[7] Statement of Senator James E. Murray as reported in the *New York Times*, February 9, 1946.

[8] Inflation and federal aid successfully obscured and indeed defeated the unfavorable employment effect of the "fair wage" part of the magic formula.

to pay a wage sufficient to provide this minimum. We shall thus legislate upon an unwilling South the very kind of fundamental disequilibrium which, in the case of sovereign nations, is used to justify currency depreciation, exchange controls, protective tariffs, export subsidies, and the host of exceptions to the principle of nondiscriminatory, multilateral trading under stable exchange rates, which is one of our avowed international objectives. We shall deny to the South, however, the right to resort to these measures for correcting its "fundamental disequilibrium." Consequently the people outside the South will be morally obligated to tax themselves to provide for those whom private firms cannot afford to hire.

Parenthetically speaking, this same idea seems to be shared by the experts in their report to the United Nations on *National and International Measures for Full Employment.*[9] They recommend that the governments of countries with "chronic surpluses" in their balances of payments should guarantee to the governments of countries with "chronic deficits" loans, at nominal rates of interest, sufficient to bridge the difference between the deficits and what their private firms and private savers are prepared to invest in the deficit countries.

2. Assuming for the moment that we are really prepared to support the South in the style that will make her a less formidable competitor, we must face a second consequence which will involve an awkward choice between inflation, suppressed inflation, and a continuous and crippling burden of taxation.

Personally I do not believe that the people outside the South will tax themselves indefinitely to cure the unemployment in the South created by their determination to see everyone employed at a fair wage. The magic formula is politically workable only as long as the costs can be concealed. Deficit financing is the politically appropriate method of financing the formula. But in that event most of the new money would soon flow into consumer goods channels via the spending of those on the public pay rolls. Their presence on the public pay rolls, however, would mean that less privately produced consumer goods and services were coming onto the market. Unless the government charged "prices" for the expanded volume of publicly produced goods and services, thereby absorbing the new money, prices in the private sector of the economy would rise. Only over-all price and wage controls, rationing, and allocations could prevent very serious inflation. The chances are good that we would attempt to hold down prices, despite the fact that a private enterprise economy cannot function for any extended period under a regime of suppressed inflation.

3. We shall assist in restricting trade and commerce with foreign nations, which is the exact opposite of one of the declared purposes of

---

[9] United Nations, Department of Economic Affairs, 1949.

the full employment bill. Why is this? Because, if public opinion comes to take it for granted that competition is unfair and detrimental to commerce between the several states of the American Union, whenever that competition and the resulting trade are due to marked disparities in the earnings of workers of comparable skills, then that same public opinion will find it still more self-evident that it is unfair to ask American workers to compete against foreign workers whose rates of pay are far lower than those in the South. Too many of our teachers of labor economics appear to be unaware of the protectionist implications of their assertion that if a union is to be an effective bargaining agency, its jurisdiction must be as broad as the market for the products made by its members. This would make sense if labor were truly a commodity that could be moved about as easily as goods move and if the workers in high wage areas welcomed with open arms their fellow workers from low wage areas. But as long as labor is highly immobile, we must look primarily to capital movements and commodity movements between nations and between regions to bring the wages and the levels of living of the people in poorer areas up closer to those in the more fortunate areas. Men of good will will wish to help in this process of equalization; but if they are to succeed, they will first have to rid their minds of the confusion enshrined in the full employment bill, the Fair Labor Standards Act, the report on *National and International Measures for Full Employment,* and in provisions like the following in the proposed Charter of the International Trade Organization (Article 7, Chapter II):

> The Members recognize that unfair labor conditions, ***particularly in production for export*** [italics added] create difficulties in international trade, and, accordingly, each Member shall take whatever action shall be appropriate and feasible to eliminate such conditions within its territories.
>
> 2. Members which are also members of the International Labor Organization shall co-operate with that organization in giving effect to this undertaking.
>
> 3. In all matters relating to labor standards that may be referred to it the Organization . . . shall consult and cooperate with the International Labor Organization.

If we who are fortunate enough to live in the wealthier parts of the United States really wish to help our fellow men who live and who for the most part would prefer to continue to live in familiar but less favored areas, let us do more trading with them and less preaching at them. And if they really want to help themselves, let them follow the example of the South and create the conditions that will attract outside capital. If they will do that, our capital and know-how will be at their disposal.[10] The millennium is not around the corner and we will not speed its coming by urging upon them standards they cannot now afford and by promising them the help we are neither able nor willing to render.

---

[10] This statement should not be interpreted as opposing generous gifts to aid people in backward areas, provided we do not try to bribe them to adopt standards which are

DISCUSSION

Martin Bronfenbrenner: The first thought which occurred to me on reading and hearing these three papers is the scant comfort which a Marxist would derive from them. For as I understand the Marxist formula of historical development, it is the sweep of developing economic life which alters economic and social institutions, and in these papers we have seen two instances where the causation works primarily in the reverse direction. These are the studies of Professors Mosk and Van Sickle, which seem to me to support essentially institutional theories of economic development, with such factors as the *latifundia* system of land tenure, unfavorable transportation rates, and minimum wage legislation accounting for differential rates of development between regions. The third paper, Professor Buchanan's, on which my attention will be concentrated, differs chiefly in that relatively minor social and political (rather than economic) institutions are called upon to explain the differences in economic development between feudal Japan and equally feudal Asia. It would be interesting to see what a convinced and one-sided Marxist would make of similar comparative studies of differential economic development.

It is difficult to disagree with Professor Buchanan's explanations of the last-named set of differences, except conceivably as a matter of emphasis. Let me summarize for you the five main points which I distilled from his paper:

1. Japan was never, like India or Indonesia, subject to colonial exploitation.
2. The Japanese ruling classes were aware of the dangers of colonial exploitation and strove consciously to avoid them.
3. Japan alone among Asiatic nations had a strongly developed spirit of nationalism, economic as well as political, which led to government development of public utilities and industries connected with the national defense.
4. Japan had a higher degree of geographic and governmental unity than other Asiatic nations.
5. Japan had a strong internal government. Internal order, in particular, was maintained throughout, and capital accumulation was encouraged thereby. Japanese feudalism, unlike Chinese or Indian equivalents, had succeeded in devolving the policing function successfully upon a special knightly class, the *bushi* or samurai.

Of these five points, the second—Japanese consciousness of the dangers to be avoided—is relatively new to me. If I had written this paper instead of Professor Buchanan, I should have placed rather less weight upon it than Professor Buchanan did or, alternatively, I should have felt required to buttress it a little more strongly with footnotes, citations, and supporting evidence. To offset this, I should have placed Professor Buchanan's fifth factor in first place, with special reference to the maintenance of order and security and to the differences from the Asiatic Continent in this respect. But these are merely matters of stress and hardly subjects for prolonged argument.

Before I close these scattered remarks, I should like to take you for a ride on a favorite hobby of mine, not touched on directly in Professor Buchanan's essay, and that is the present-day significance to America of the economic history of Meiji and Mitsui Japan over the interval from 1860 to 1910, approximately. It seems to me that we would be much less impressed with the accomplishments of the Soviet Union since the 1917 Revolution and much less inclined to consider that only a highly advanced and progressive social system could have brought them about, if we knew more about the development of Japan under a social system that most of us would class as retarded and at least semifeudal. Japan, over a fifty-year period, succeeded simultaneously in doubling her population, doubling her standard of living as measured by real consumption per capita, and rising from a military nonentity to a world power. This is not the place and I am not the man to compare the two developments in full detail, but I should like to suggest that in neither case is the explanation to be found in the superiority of the political or economic systems of the countries involved, but rather in rigid discipline plus the wholesale and rapid adoption and adaptation of the industrial techniques of Western Europe and America. Let me merely repeat in closing that students of economic history and development would be in a position to render a real service to their students and the public if they knew more about Meiji Japan and let their knowledge temper their astonishment at the achievements of Soviet Russia.

JOSEPH L. FISHER: An understanding of the causes of economic progress has long been sought by social scientists. Part of this understanding involves the measurement and analysis of differential economic progress in different countries and regions. The pursuit of this will-o'-the-wisp is frustrating, but to the person who finally is able to grasp it, or part of it, the rewards will be great.

In the third paper in this group, Professor Van Sickle has given us a provocative examination of the Southeast as a region of delayed industrialization. Dr. Van Sickle has a considerable advantage in speaking on this subject since he is both an insider and an outsider. For some time he lived in the Southeast and worked on that region's economic problems. Now he lives outside the Southeast and is able to view the problems of his former region from a distance.

I would certainly agree with Dr. Van Sickle that the Southeast is a case of delayed industrialization. The reasons for the delay have been expanded upon by many writers. As Dr. Van Sickle notes, capitalism penetrates more or less noncapitalistic areas at widely different rates, depending upon the individual, social, economic, political, and cultural receptivity of the area to capitalistic development. This was quite apparent in Professor Buchanan's discussion of Japan and other Asiatic countries. Professor Mosk in his paper on "Latin America versus the United States" developed this point with reference to the countries south of the border. Institutional factors in these countries, such as the tenacity of a semifeudal agriculture and a preference for investment in land, throw up a barrier against industrialization which is not easy to surmount. With many differences, the Southeast only in more recent decades has been making major headway in overcoming similar barriers.

The ten principal factors cited as responsible for "poverty in the Old South" are those which the author and his colleagues developed in the Pace Committee *Study of Agricultural and Economic Problems of the Cotton Belt.* I would add a couple more to it which might be thought of as falling within one or another of Van Sickle's list, but which stand out more clearly if separated from them. The first is the unfavorable terms of trade of the Southeast which, though diminishing, still characterize the region. The Southeast, more than the rest of the country, depends upon exports abroad and to other U.S. regions which, during most of the nation's history, have been competitively produced and marketed. Southeast imports, on the other hand, have tended more to be manufactured products produced frequently under conditions of monopolistic competition. As a result, exports have tended to be low in price and imports high in price. This point has been developed with some care by Hoover and Ratchford in the report they prepared a year and a half ago for the Council of Economic Advisers entitled, *The Impact of Federal Policies on the Economy of the South.*

Another main factor responsible for southern poverty which I would add is the prevalence of an agricultural land ownership system which in the South, more than in the rest of the country, is characterized by relatively large numbers of sharecroppers, tenants, and submarginal private owners working uneconomically small farm units. This, I would argue, is an institutional barrier to development, since it sustains a fairly large element in the population with a frame of mind not hospitable to technological change nor particularly ready to assume the initiative and responsibilities of enterprising ownership.

The evidence is clear that the Southeast in recent years has gained rapidly on the national average in such basic measures of economic welfare as per capita income, percentage of higher value-added industries, and percentage of the labor force with higher skills. Partly, I suppose it is because the Southeast had so much farther to go than the rest of the country. The chief reason, however, as Dr. Van Sickle points out, appears to have been the growing importance of industry in total regional economy. The fact that during the twenties and during the forties large numbers of southerners migrated north and west to higher paying jobs meant that per capita measures of economic welfare rose much faster than they could have done otherwise.

Awareness of the advantages of the large trainable labor force in the South in combination with favorable resources, climate, markets, and other advantages has lead more and more northern firms to seek southern locations for expanded operations, and also has led to a considerable indigenous industrial growth. Southern initiative and enterprise, private and public, along with northern, has played an important role in these developments. The recent case studies of *Why Industry Moves South,* by McLaughlin and Robock, indicate that the large, stable, trainable labor supply in the South constitutes more of an inducement to new industry than lower wage rates or less developed unionism.

The last half of the paper, which is on reactions to southern economic progress, is much more restricted than the first half, and deals almost exclu-

POINT FOUR: DEVELOPMENT OF BACKWARD AREAS

A SECOND LOOK AT POINT FOUR

By James Baster
United Nations

Because its aims are diverse and somewhat ill-defined, Point Four is in some danger of coming to mean all things to all men in the underdeveloped areas. But at least part of its motivation in the Western countries may be said to arise from the desire to see the standard of living of underdeveloped countries raised in a way which will establish or strengthen the kind of economic system already in operation in the West, where resources are, broadly speaking, allocated by the movement of prices and the decision to spend or not to spend is left to the individual income receiver. The problem of transplanting from Western countries to underdeveloped areas what may shortly and with pardonable exaggeration be called the "free" economy has so far proved in fact very intractable and indeed the inability to spread itself in non-Western environments may yet prove to be the culminating failure of that system. The recipe so far applied has been to export capital and technical knowledge to the underdeveloped countries under the ordinary stimulus of profit on the assumption that the rising standard of living resulting therefrom will provide a congenial climate in which the free economic system may take root. Point Four is a somewhat new departure in this field, and the object of this note is to enquire, on the assumption that the expansion of the free economic system is desirable, how
nowledge from developed to
ith the growth of such a

ow—which is presum-
jargon—have their
orth remembering
he task of trying
s by altogether
n of skilled
ious of its
from the
hnical
der-
nd

In principle it is surely unexceptionable that economic resources should be used in the most efficient way in the light of the most up-to-date technical knowledge available anywhere in the world. Although this ought not to imply in theory and cannot imply in practice that everyone everywhere should know everything, there is obviously a great deal to be said for spreading a knowledge of the application of current scientific discoveries to the production of needed commodities. From this assertion it is but a short step to the preparation of schemes for the dispatch of technical experts all over the world from rich countries which can afford science to poor countries which cannot, and the transfer in due time of the capital necessary to finance the projects of "economic development" which they work out on the spot. Of course it is true that there may be no explicit link between technical assistance and foreign loans, but it is usual to assume an implicit one; and it is fairly obvious that the interest of poor and underdeveloped countries in receiving advice without the means to put it into effect would be minor. It may be asserted of these countries with some confidence that while they do not mind pleading ignorance *and* poverty they do not like to be convicted of ignorance *tout court.*

However necessary the link between technical assistance and capital exports may prove *to* be for political reasons, the economic consequences have *some*times been unfortunate in practice in the past and risk *being* so in the future unless some simple economic truths are more *widely* appreciated than they appear to be at present. The appropriate definition of a technique from the present point of view might be "a method of assembling quantities of factors for the purpose of producing some wanted good independently of their price" the advantage of which is that it high lights

numerable ways of produc

the most economical way

factors are obtainable a

technicians do not ha

and could be pract

sponding to the r

ucts familiar in

the short run

country. *If*

will be

A sa

distributive finance and less reluctant to adopt direct controls than others, the differences are in general slight and the similarity of development impressive. Nor are these differences certain to continue in the future. Relatively slight shifts in the internal balance of power may well diminish them.

III

The central problem, however, does not relate to differences in practice but to the problem of incompatibility. Is a high level of redistributive finance and is the use of direct welfare controls compatible or incompatible with a liberal economy? These are the two questions and they require separate treatment.

Public finance is redistributive when it makes real incomes less unequal by manipulating taxes and public expenditures. On the tax side, we are interested in the level of taxation and in whether or not it is progressive. On the expenditure side, we must pay attention to direct transfer payments (such as unemployment benefits, pensions, and cash benefits from health insurance); to indirect transfers in the form of subsidies (such as food and housing subsidies); and to expenditures on certain kinds of public consumption, especially free education and free health services.

The familiar case against redistributive finance as a condition debilitating the creative forces of the liberal economy is generally stated as follows: Under the price system gross income differentials tend very roughly to equal the value of productive services rendered; thus giving the owners of each factor a powerful incentive toward maximizing its productivity. By divorcing net real income from productive effort, redistributive finance tends to have a disincentive effect which works in two ways: by diminishing the net incomes of the more productive f[illegible]tors (via taxation) and by augmenting the net incomes of the less p[illegible]ductive factors (via public expenditures). This may cause both kin[illegible] of factors to be less efficiently employed than they would be otherwise. Specifically, it is contended (1) that redistributive finance tends to reduce the supply and efficiency of work by changing the balance between leisure and money-earning activity, by weakening the incentive to acquire special and superior skills and to shift to employment where these skills are best rewarded, and by reducing work effort; (2) that it tends to discourage venturesome investment by cutting into the rewards of risk-taking without reducing the risks, thereby putting a premium on liquid holdings and relatively secure investments; and (3) that it tends to diminish both the ability and the propensity to save. In addition, there are several relatively minor effects. Redistributive finance may induce emigration of capital and labor; high business taxes may encourage wasteful expenditures in the form of excessive advertiscial services, such as education and health, there has been some shift in income distribution in favor of the lower-income groups in nearly all countries. Most income redistribution, however, seems to have occurred within the working class. Especially in France and Italy, income redistribution was effected largely in favor of married workers with large families at the expense of single wage earners. With the possible exception of Italy and Switzerland, the general impression is one of similarity rather than divergence in the development of welfare measures. Switzerland, however, was and is in a rather special position, and Italy, for many reasons, can scarcely claim to have a model liberal economy notwithstanding her comparative restraint in developing welfare programs.

The original spread of direct controls and subsidies and the differential rate of decontrol have perhaps more than any other single factor contributed to the feeling that Western European economies can and should be properly divided into liberal and welfare. However, we are concerned here only with controls whose major purpose is a welfare purpose as defined. No doubt, the firm determination to let neither inflation nor disinflation diminish the share of the lowest income groups in aggregate real income made, in Britain and the Scandinavian countries, for slow haste in the pursuit of disinflationary measures and hence in the gradual abandonment of direct controls. The same concern affected the exercise of other nonwelfare controls. Still, the original spread of direct controls and the differential speed with which they are being discontinued also reflect the severity of the economic problems with which various countries were confronted after the war. The problems facing Belgium were for several reasons less acute than those with which Britain, Norway, and the Netherlands had to cope. Moreover, discrepancies in practice sometimes reflected perhaps more differences in the capacity of governments to administer direct controls than differences in objectives. In France and Italy, for example, the disposition to abide by price controls and rationing was conspicuously weaker than in Britain, the Netherlands, and the Scandinavian countries.

Finally, there are important differences in talking about economic policy. In Belgium, France, Italy, and Western Germany there is a strong disposition, in recent years reinforced by dependence upon American aid, "to talk a liberal economy" even when a great deal of government intervention is actually practiced, while in Britain and the Scandinavian countries where socialist parties are strong or in control of the government, there is a strong tendency "to talk a controlled economy" even when the market remains the chief instrument of resource direction.

To conclude: while there is a measure of factual justification in regarding some Western European countries as being more intent on re-

revenue and (2) direct controls over price, production, and consumption which do not involve the expenditure of public funds except for defraying the costs of administering these controls. Regarding redistributive finance, there are no statistical studies permitting a precise comparison between the countries concerned. Such relevant data as are available make for a rather blurred picture.[1] Thus, in 1948-49, as a percentage of the net national income (at factor cost), total revenue collected at all levels of government was highest in the United Kingdom and Norway and lowest in Italy, but it was about as high in Belgium and France as in Sweden, Denmark, and the Netherlands. The percentage of total revenue raised by indirect taxes was relatively low in the Scandinavian countries and in Western Germany, very high in France and Italy, while the United Kingdom, Belgium, and the Netherlands were in an intermediate position. Public expenditures on social security and price subsidies were highest in Norway, France, and Belgium and lowest in Italy, while Western Germany, the United Kingdom, Denmark, Sweden, and the Netherlands were in an intermediate position. If other current government expenditures (excluding investment, defense, and national debt interest) are added to expenditures on price subsidies and social security, the total ran to over 25 per cent of the net national income in Belgium, France, Western Germany, Norway, and the United Kingdom, and to under 25 per cent in Italy, Denmark, Sweden, and the Netherlands.

Regarding direct controls, including rationing and subsidies, the trend has been in the direction of more or less gradual removal everywhere, the speed of derationing having been greatest in Italy, Belgium, France, and Western Germany and slowest in the United Kingdom and Norway, with Denmark, Sweden, and the Netherlands in an intermediate position. As of the first half of 1950, all countries still retained rent controls and subsidized housing construction to varying degrees. Incidentally, it is difficult to compare the extent of nationalization in the Western European countries. But differences in the spread of nationalization are certainly small except for Italy where government ow [illegible] ship-control over industry is most extensive. Through the Institut [illegible] Industrial Reconstruction, the government owns and controls a [illegible] part of the iron and steel industry, the engineering industry, [illegible] utilities, the merchant marine, and ship building.

Blurred as the entire picture is, the war and postwar pe [illegible] brought an extension of social security measures and the a [illegible] food and housing subsidies throughout Western Europe. A [illegible] sult of these and of an increase in wage levels (relativ [illegible] comes), changes in the wage structures, rent control, and [illegible]

---

[1] *Economic Survey of Europe in 1949* (Geneva, 1950), Ch. 2 and App [illegible] III.

WELFARE-STATE MEASURES AND THE FREE MARKET IN INTERNATIONAL TRADE

By Klaus E. Knorr
Yale University

I

The main purpose of my paper is to appraise the disposition—widespread in this country as well as in Europe—to divide Western European countries into "liberal economies" and "welfare states" and draw from this distinction policy conclusions and other generalizations.

The terms liberal and welfare are, of course, weasel words. They are so empty of agreed meaning that they prohibit intelligent discussion. But for the present discourse, I define a liberal economy as one in which, given the widespread institution of free enterprise, the market process is the chief instrument for allocating productive resources; and I define a welfare economy as one in which the state uses public finance or direct controls for redistributing individual incomes, which have resulted from the working of the market process, in the direction of lesser inequality. From this discussion of the welfare economy I deliberately exclude full employment policies and socialization-of-industry policies, although these too are sometimes regarded as belonging to the essence of the welfare economy. The seriousness of the commitment to high-employment policy—universal in all countries in the Western World—and the consequences of employing different methods for honoring the commitment have found an ample airing. The case for socialization does not rest as directly on welfare considerations as the other types of measures identified above.

If these rough definitions are found acceptable, then it should be agreed that it becomes meaningless to say that an economy must be either liberal or welfare. No sensible distinctions can be made on an either/or basis. Instead, it is the scale of welfare operations which in [illegible] st current discussion is taken as the criterion on the basis of which [illegible] onal economies are divided into liberal and welfare. A relatively [illegible] scale of welfare operations is taken to characterize the welfare [illegible] my while a liberal economy is identified with a relatively low scale [illegible] operations.

II

[illegible] quent division of Western European economies into liberal and welfare is largely impressionistic. When talking about the welfare state we must distinguish between two types of welfare measures: (1) redistributive finance, involving the collection and expenditure of public charge of operating the new plant. But numbers of poor agricultural countries should also be included in this category where the physical configuration is mountainous and "staircase" or terrace farming is practiced, notably as in certain parts of China and the Middle East. The capital cost of constructing some of these walled terraces over many generations must have been enormous, but the cost of maintenance tends to be small, and the agricultural tools used have remained the same for generations and look like gardening implements. Even nineteenth century technical improvements, such as the steel plow cannot be used and the crops have to be reaped with a sickle. In relation to their standard of living, these countries could only be called "overdeveloped" by disregarding the normal useful connotation of the term.

The generalization through Point Four or other technical assistance plans of the most up-to-date techniques throughout the industrial world would probably produce a considerable economic waste and disturbance even if the necessary capital imports could be furnished to apply it. In the first place, it would interfere with international specialization on rational lines by producing exports which could not be maintained without continuous subsidies and by replacing imports which would have to be kept out by a permanent tariff. The demands on local savings for the maintenance of technically up-to-date equipment would reduce the types of investment appropriate to the local level of savings plus capital imports (not foreign aid) and the local price structure. If maintenance involved foreign exchange expenditure, an export surplus unwarranted by the price structure would have to be generated to meet it. Finally, industrial development along exclusively capital-intensive lines in poor agricultural countries would keep too much labor in agriculture and thus increase the underemployment from which these countries suffer.

The distortions due to the introduction of technically up-to-date equipment in one economic sector, say combine harvesters in agriculture, may be small considered by themselves but modern techniques (e.g., production by high-speed machine tools and the development of new ferro-alloys) are frequently interdependent so that it would be obviously wasteful or even technically impossible in particular cases to introduce one without the other. Moreover, the rates of output which these techniques make possible may be so large in relation to the output of complementary goods that the latter will consequently have to be speeded up, too.

The conclusion is, of course, not at all that undeveloped countries must be denied the benefits of modern applied science because they are poor and overpopulated. More important—because this is where misunderstanding will be widespread—it does not mean dusting off eighteenth century industrial machinery, now in the museums, or even putting into use obsolete machinery in developing areas, though the international trade in second-hand textile machinery from the United Kingdom to the Far East after World War I may have been what the situation then required. What is really needed now and in the future is the far more difficult, but more rewarding, task of designing machinery and capital equipment, not only in the light of the most advanced technical knowledge, but also in the light of the current level of wages and interest in the undeveloped countries, where it is to be used. This sort of technical assistance sets for foreign technicians a task which cannot normally be satisfactorily completed in the few weeks or months for which they are usually recruited; and it sets for the local technicians a task for which their foreign training does not necessarily fit them unless their special needs are taken into account.

The observance of the ordinary pricing rule should help in cases of doubt. New industrial and other techniques should not be introduced into underdeveloped countries unless they are "self-sustaining" with reference to current imports (not gifts), the current price structure, and the current rate of interest. In default of a practical pricing test, the agency responsible for technical assistance should apply a synthetic one satisfying the above conditions.

It is of course obvious that breaches of these conditions are at present quite common in many underdeveloped countries. Technique in foreign-owned "concessions" industries, such as oil in the Middle East, is far in advance of that in local industries and generally follows the best practice in the creditor country. But this is in virtue of the special position of concessionary companies in world markets and their protected status under their agreements with local governments. In at least one country, namely, the U.S.S.R., economic development has proceeded in deliberate neglect of these conditions. There it seems entirely probable that technique is substantially out of harmony with factor endowment. It is, however, not the object of this note to show that neglect of the rules does or does not bring immediate economic disaster; it is to show that observance of it may facilitate the transplantation of the Western type of economy.

government, the underdeveloped country is under a serious handicap in carrying out its own plans for economic development.

The dilemma is simply this: if the United States, through its representatives, imposes its judgments upon other governments and economies, we will be charged with being "political commissars for economic imperialism." Even if we establish severe conditions for the receipt of aid to ensure the effectiveness of some program, we may be accused of "invading the sovereignty of independent nations." On the other hand, if we do not take an active role, the developmental effort may be dissipated in inefficiency and confusion and the net result may well be very slight.

This dilemma has proved to be much more troublesome as a matter of public relations than as a matter of any real threat to sovereignty. American policy is clear that it seeks to build strong, independent nations. So long as this objective can be clearly declared and maintained, the so-called "interferences" arising from the process of assisting in the economic development of other countries can hardly be called imperialism, except by deliberate liars—particularly since our assistance is provided only on request.

However decent and honest as we may believe our intention to be, the dilemma still remains for us to resolve, and we have dealt with it in various ways. In Greece, we assumed very considerable responsibility. In the Marshall Plan countries, we concerned ourselves largely with the use to which our aid was put and to the support of objectives, such as the liberalization of trade, already subscribed to by the Organization of European Economic Co-operation before any American funds were appropriated. In the case of the Philippines, we gave them their full independence along with substantial monetary assistance. However, since Philippine independence, the fiscal situation in the Islands has deteriorated dangerously, and we are now offering further support, provided a series of specific steps are taken to straighten out the situation.

One important aspect of the problem arises from the proposition that if and as one accepts greater participation, one's responsibility also increases. If we are to take a positive role in economic development, we need to know much more than we do about the nature and character of social and economic change. Economists, for example, have been preoccupied with the current American economic scene, except as they have been exposed to economic history, but even that was likely to be devoted to tracing the antecedents of our own present system, particularly by examining the feudal system.

Our body of economic theory is related to the preconceptions and mores of Western civilization. It is worth remembering that Karl Marx built his system upon an interpretation of historical development, while classical economists focused their cogitations much more upon the theoretical operations of economic equilibrium.

We are woefully ignorant of contemporary social and economic institutions in most other countries. It is clear that these other societies and cultures cannot and should not be made over in the American image, but our accumulated social science knowledge has all too little to tell us about the possibilities and limitations of economic development in the underdeveloped countries. If we hope to give effective developmental aid to other countries, we must be prepared to play an active and responsible part. That means that we need a rapid advance in our understanding of and knowledge about the whole complex of problems involved in social and economic change, with particular reference to the institutions presently existing in the underdeveloped areas. This is a practical job for the social scientists.

One of the most difficult sets of choices in economic development may be called "the timing dilemma." Some less sophisticated individuals have thought of economic development almost exclusively in terms of capital goods, asserting that the problem could be solved if the underdeveloped countries could only get machinery.

But economic development is no simple matter and there is no magic formula for raising standards of living rapidly. Usually major social changes are required. Education and training are a basic necessity. And increased industrial production requires many supporting economic activities such as transportation and power. Obviously, economic development is a slow process with the possibilities ranging from zero to a small percentage advance each year.

However, there is need for haste. The cumulative process of development may never achieve real vigor unless it quickly arouses hope and captures the imagination and allegiance of peoples. The essential drive must come from within the country itself. Furthermore, political instability and civil disorder are likely to make improvement impossible unless there is evidence of improvement. The improvement called for is an expansion in per capita consumption—itself a difficult achievement in countries with rapidly increasing populations. But for the success of the enterprise, it is important to make immediate progress.

It is inevitable, therefore, that consumption and capital formation will compete with each other, with consumption having much the strongest drive behind it. There is an inevitable and sometimes subconscious pressure to give special emphasis to programs with immediate results. The local governments are eager to redeem their campaign promises, if there was any campaign, and in any event to assure their survival in power by pointing to a record of achievement. Even those abroad giving assistance, be they public or private, like to have definite results to report to the sources of their funds. It is a ~~matter-of-fact~~ that the most urgent requests from some of the underdeveloped countries have been for credit to buy consumers' goods—sometimes because of natural catastrophes, such as earthquakes or famine, but often on grounds of immediate political necessity.

In countries where productivity is already extremely low, domestic capital formation is necessarily limited. This situation may even lead to a condition where economic development can best be furthered by providing foreign consumers' goods, which then can be translated into local currencies and used for the local costs of developmental enterprises which would not otherwise be met without depressing the already substandard of living.

The fact remains that economic development is inherently a slow process. It may be necessary to break through the dead hand of custom, made particularly difficult because fixed ways and attitudes often have a moral or religious basis. Luckily, there is a good deal of evidence that economic development can be an accelerating process. It is slow at first because the margin of saving for capital formation is small, because the number of people able to act as catalysts are few, and because the idea of change must become acceptable before people become teachable. Both capital formation and teachability tend to pick up speed as production grows, education spreads, and horizons widen.

Much can be done with promises about the future, as the communists have demonstrated. But sooner or later there must either be a police state to deal with complaints or there must be a demonstration of progress. Programs must be developed, not merely as sound economic blueprints, but with the needs and nature of the human beings involved clearly in mind. If the people of a country are starving, it is a hard choice for its rulers between using its credit to buy rice or wheat, or to develop irrigation systems and build fertilizer plants. Since those who provide the credit also have an option to provide it for one purpose or another, they face the same problem.

Next, may I cite the private enterprise dilemma. We credit much of our own tremendous industrial development to the releasing of individual energies and imaginations through the institution of private enterprise. It follows that we cannot help feeling that this great motive force would accomplish wonders in the underdeveloped countries, if fostered and aided.

On the other hand, underdeveloped countries are wary of private enterprise. In the past, foreign private enterprises have not always been locally popular, and in many countries, a form of pre-industrial local private enterprise has led to the growth of divergent wealthy and poor classes such as Marx mistakenly held to be inevitable for all capitalist societies. Hence government policies, regulations, and attitudes may inhibit not only foreign-financed but even domestic private enterprise.

American policy has strongly supported the notion that the channels should be cleared for the flow of private capital abroad as a means of providing American capital, technical skill, and management experience to other countries. To that end, sustained efforts have been made to negotiate commercial treaties which would give assurances of fair treatment to foreign investors. However, treaties or no treaties, private capital seems to be loath to go abroad in these days of political and economic insecurity unless its prospective rewards are so great as to make these risks worth taking. The necessity of a high rate of return appears to rule out all but a few fields of endeavor (certainly eliminating the basic public service developments such as transportation, power, irrigation, etc.) or to arouse such cries of foreign exploitation as to lead to further regulation by foreign governments. Some have suggested the use, as an incentive, of reduced taxation in the United States of foreign earnings, but there are many other interests (besides educational and charitable institutions) which would like similar encouragement. At any rate, the fact is that at present, private enterprise is not doing the job. As a result, governments are playing a large role and one American principle comes in conflict with another.

As to private enterprise in general, it is of course true that many countries, even our own, today take the form of mixed economies. Private enterprise is perhaps most valuable in the pioneering activities where experiment and imagination are attracted by large potential rewards. In an underdeveloped country the problem is largely one of utilizing the experience of other countries. Thus Russia, between the two wars, was able to move ahead rapidly because she started far behind the established levels of the more advanced countries and could take over, without the costs of trial and error, the advanced technology of the Western World. Many individuals in other countries would argue that private enterprise is not as essential in a country which is far behind the procession. They say that, since the problem is one of how best to use scarce skills, capital, and resources, a central planning and control agency, i.e., government, is the minimum requirement, and government operation itself may be the most effective device to get things done.

The attitude in other countries towards private enterprise has changed noticeably during the last three years. There is much less confidence in government operation as a panacea for all economic ills and much more recognition of the part which private enterprise can play in an expanding economy.

Not merely for them, but also for us, the private enterprise dilemma raises a host of difficult specific problems. Can we expect private capital to flow abroad in larger volume? (The Marxist would answer, of course, that it will and must do so.) What special encouragement, if any, should be given by the government? What should our attitude be towards an underdeveloped country which employs government screening of foreign investment and government direction of private investment? How about government to government loans? How about the development of an economic plan for a country? What can be done to encourage private savings and investment in forms other than jewelry and real estate? These are not hypothetical questions. They are inevitable in a world of varying economic and political structures.

Next, let us consider the trade policy dilemma. Economists have long had a clear-cut doctrine that trade barriers interfere with the most efficient use of resources, physical and human. For seventeen years, American foreign policy has been directed towards the liberalization of trade, although I hasten to confess that consistency has not been perfectly achieved in this field.

Many of the underdeveloped countries have a great desire for industrialization. They are eager to reduce their dependence on one or a few major farm or mine products. They see the so-called "industrial" countries as those with the highest standards of living. They believe that economic well-being is highly and positively correlated with the proportion of the population engaged in industry. Many of them are particularly eager to develop heavy industry even at high cost, because of the degree of independence which it gives them, the economic counterpart of political nationalism. It is interesting to note that, even in the more sophisticated countries of Western Europe, the efforts of the Economic Co-operation Administration to initiate programs in terms of specialization of labor within the area of the co-operating countries were considerably defeated by the unwillingness of each country to increase its dependence upon other countries, even if it were a mutual interdependence.

This urge for the development of industry leads to a desire for high tariffs. They are eager to build up industries that will compete with, not complement, those already existing in the developed areas. They are interested in growing more food and fibers only if, in fact, they are now importing them. So the "infa[illegible] tariff defense once more appears in force.

When fifty-six nations met at Ha[illegible] to endeavor to find a common basis for an i[illegible]ade field, one of the most vigorous and sustained controversies among the representatives revolved around this very problem. The net result was that, while the basic policy agreement on which the charter was predicated was directed towards the reduction of trade barriers, there were complicated escape provisions outlining methods by which underdeveloped countries might for purposes of development obtain release from commitments assumed in trade agreements and under the charter itself with respect to commercial policy. Some such compromise was the only basis upon which agreement could be reached.

Parenthetically, it may be interesting to note the interesting twist which the dilemma takes when American management and capital establishes an infant industry in a foreign country behind a protective tariff. On several occasions, the United States Government has been under considerable pressure from American export producers to obtain lower tariffs into a country on a given product and from other American interests manufacturing within the foreign country not to expose them to the devastating competition of the continentals. The Americans operating abroad will argue that their costs are higher for a number of reasons, such as the small scale of their operation, higher per unit labor costs, and the fact that usually they produce only an incomplete line—all of which conditions they claim will be corrected over time, although I have yet to hear of a case where that time has been reached. Furthermore, they have painfully developed a local market under a given set of conditions including the tariff, and now it should not be available to others who have devoted no effort to its creation. Finally, they say, how can economic development ever take place, if new enterprises in the underdeveloped areas must compete with the efficiency of modern American industry? (The next caller may outline the problems which he faces in the United States as the result of cheap labor products being imported from abroad.)

In the field of trade policy, the underdeveloped countries are extremely suspicious of the policies of the industrial countries. Some apparently believe that the basic purpose of present desires to liberalize trade is to obtain foreign markets for manufactured goods and that the advanced countries are endeavoring to deny to underdeveloped nations freedom to use the very devices by which the industrial powers have established their pre-eminence. The argument parallels that of the Marxist, that capitalist countries must export to live and that heavy industry is the basis for sound economic development. One must add that ma[illegible] businessmen fear the industrialization of other coun[illegible] threat to their foreign markets or as potential i[illegible]n market itself.

It has [illegible]mmercial policy problems cannot

ana three yea
ternational charter in the

be resolved simply by reference to the principle of comparative advantage. They arouse conflicting interests which confuse the determination of the national interest, and they involve national objectives

from supply and demand curves.
different shapes ac-
ing inter-
come-

ies, either as a
aders of the Americ
long been apparent that co

the prices of their exports. They may well find themselves with rapidly accumulating supplies of dollars and other foreign currencies but with limited opportunities to spend them for technical assistance or for capital goods. Policies with resp urse limit economic developmen bilities or both

Un

prosperity are not changed one iota by this necessary digression. Towards our long-run purpose, there can be no question of the importance of American aid as our contribution to "the efforts of the peoples of economically underdeveloped areas to develop their resources and improve their working and living conditions." To be sure, there are problems and policy issues. There is nothing unusual about this in the field of economic foreign relations. What is important is to regard these policy and program conflicts not as obstacles to action but as problems which must be resolved again and again. The wisdom of the solutions will depend in large part upon the breadth of knowledge and the depth of understanding of the social and economic processes involved. It is my conviction that the economists of this country can make an ever increasing contribution to these basic requirements.

CURRENT PROBLEMS IN INTERNATIONAL TRADE

INTERNATIONAL TRADE THEORY AND POLICY—SOME CURRENT ISSUES

By JOHN H. WILLIAMS
Harvard University and the Federal Reserve Bank of New York

I

When my participation in this program was suggested, there was a question whether I should present a theoretical paper or one dealing with the present situation. It set me thinking, as often previously, about the relation between theory and current problems. Since 1914 there has been a greatly heightened interest in international economics. It has resulted in a voluminous literature, embracing the greatest advances in our thinking since Ricardo and Mill. The main drift in theory, until recently at least, seems to have been toward further emphasizing equilibrating tendencies—whether through refinements on the classical analysis, or through the use of more modern value theory, or by introducing more countries and commodities. This is what the writings [illegible] of such eminent international trade theorists as Taussig, Ohlin, and Graham have in common. The so-called "modern," or Keynesian, approach has carried this emphasis even further through its analysis of international trade adjustment in terms of income.

Yet the period has been one of profound and virtually continuous international disturbance. The central question is how to reconcile theory and fact, or how to build a bridge between theory and current problems. Are the theories misleading; or are the forces they (rightly) emphasize temporarily submerged; or does the fault lie with economic policies pursued?

One of our chief needs today is to clarify the distinction between long and short run. Equilibrium analysis almost inevitably introduces a bias toward calling maladjustments short run, even though they may endure for years. In a recent article Metzler, after bestowing well-deserved praise on Graham's *The Theory of International Values,* remarks on Graham's underemphasis on short-run forces: "Graham's theory . . . is entirely a long-run theory of adjustment, whereas most of the balance-of-payments problems, including the disturbances of the interwar period as well as the current dollar shortage, are essentially short-run problems." And later on he says: "A movement of capital and labor from one industry to another frequently requires a protracted period of time. Indeed, adjustments of this sort sometimes continue over several generations."[1] G. A. Elliott's excellent review of Graham's book, though in general highly favorable, similarly concludes with questions about the short run. "Should not some consideration be given to the obscuring garments in which the eternal verities are currently clothed? May not the path to equilibrium affect the equilibrium position itself?"[2]

I have picked out these comments because they raise the kinds of questions that have always interested me most with regard to international trade theory and have seemed to me particularly relevant to policy. I recall in 1919 having the great privilege of discussing at our annual meeting Professor Taussig's paper on Germany's reparation payments and of being brash enough to question the conclusion that the completion of the reparations process would lead, theoretically, to a "stage of equilibrium identical with that which prevailed at the very start." But Professor Taussig made it clear in his paper that he was merely applying the Ricardo-Mill analysis, and not making a prediction: "Only if the assumed premises hold good, is it to be expected that the consequences will ensue as predicted"; and his paper concluded with the query: "Who can say what sort of world we shall find ourselves in ten years hence?"[3] Surely most people would agree that the events of our times have changed the equilibrium positions. But is that not a way of saying that the so-called "short-run" changes have enduring effects? And if that is so, are we not really asking whether a method of analysis which treats the "problems" of international trade as outside the scope of (long-run) "theory" is useful as a guide to policy, or indeed for any purpose other than the intellectual pleasure derived from exercises in internal logic?

As Taussig said, it is a question of the premises. Apart from the Keynesian emphasis on income and effective demand, international trade theory has always turned primarily on adaptability of resources, and particularly on the assumed contrast between internal and external mobility of factors. Assuming full employment as given, a high degree of internal adjustability to external changes, constant costs and given amounts of resources in the trading countries, it follows readily that changes in demand among the trading countries for each other's goods could have only mild results, affecting as Mill said the "division of the gain" from trade, but only within the narrow limits set by the unchanging zone of the comparative costs and only briefly disturbing the unchanging equilibrium position.

---

[1] L. A. Metzler, "Graham's Theory of International Values," *American Economic Review*, June, 1950, p. 320.

[2] G. A. Elliott, "The Theory of International Values," *Journal of Political Economy*, February, 1950, p. 29.

[3] F. W. Taussig, "Germany's Reparation Payments," *American Economic Review*, March Sup., 1920, pp. 35, 49, and my comment, pp. 51-52.

Without attempting to trace the development of more recent theory, my impression, as I said earlier, is that the main drift has been toward rather than away from the Ricardian analysis. This seems to me true even when writers are specifically attacking the comparative cost doctrine, as Ohlin and Graham have done. Their main purpose has been to supply a more modern value theory. But the effect of this modernizing (and also of introducing into the analysis more countries and more commodities) has been to strengthen rather than weaken the basic classical emphasis on adaptability of the internal economy to external changes.[4]

The fault still lies with the assumptions. In a paper some twenty years ago, I tried to express my doubts about the classical assumptions.[5] Perhaps what they added up to was a protest against attempting to apply static equilibrium analysis to an ever changing world. One paper to which I have often returned is Allyn Young's brilliant presidential address before Section F of the British Association in 1928 on "Increasing Returns and Economic Progress": "No analysis of the forces making for economic equilibrium, forces which we might say are tangential at any moment of time, will serve to illumine this field, for movements away from equilibrium, departures from previous trends, are characteristic of it."[6] Of course the answer that is now fashionable for all such criticism, whether in international trade or other fields, is that we must "dynamize" the static theory. But I as yet have little faith. May this not be merely another form of question begging? Is not the essential problem whether international trade changes are sufficiently systematic to lend themselves to any sort of equilibrium theory?

The difficulty seems to me inherent in the nature of the subject matter. International trade is so complex, so subject to heterogeneous conditions and to ceaseless changes in conditions, that it seems to me almost as naïve to speak of *the* theory of international trade as I have long thought it to be to speak of *the* theory of the business cycle. But we can study processes of change, and are more likely to do so usefully if we do not have to put everything that does not fit the long-run "theory" under an expansible umbrella labeled short-run "problems." This should not, however, mean dispensing with the concept of balance, as something to be striven for by conscious policy.

---

[4] One might add much else in the literature pointing in the same direction, but I will mention only Paul Samuelson's recent demonstrations, which have attracted wide attention, that, following up on Ohlin's approach, one may prove that even factor returns are equalized as between the trading countries. See his papers on "International Trade and the Equalisation of Factor Prices," *Economic Journal*, June, 1948, and "International Factor-Price Equalisation Once Again," *ibid.*, June, 1949.

[5] "The Theory of International Trade Reconsidered," *Economic Journal*, June, 1929.

[6] *Economic Journal*, December, 1928.

The concept of balance could be defined more loosely and at the same time more usefully, since it would take its meaning from the actual problems in question. Since 1948 (at least before Korea), we have had as our working concept Western European "viability," or freedom from the need of "extraordinary outside assistance." But Point Four has broader implications; and so very likely there will always be a changing target and a changing conception of the practical meaning of balance. What it comes to, I think, is that once we attempt to deal with the world as it is rather than on the simplified assumptions of traditional theory, there can be many and varying conceptions of balance, and the answer depends on what we are striving for rather than on inherent tendencies arising out of limiting assumptions which, in large part, rule out the actual problems that we face.

II

The questions I am raising, for both theory and policy, have since the war been brought into sharp relief by the debate about the dollar shortage. It has been a good debate, because it has been about a live issue, of world-wide importance, in which theoretical analysis and policy prescriptions must come to grips. One thing it has brought out is that all or most of us have felt more strongly than the classical economists ever did, or perhaps ever had occasion to, the need of doing something. Even those who have held to a laissez faire conception of international trade have felt the need of creating through policy the conditions under which free market forces might work. At the other extreme are those who draw the conclusion that the only remedy is full economic planning.

What has interested me especially has been the varying emphasis on internal and external factors. This difference is largely based on adherence to the traditional type of international trade theory on the one hand and to various degrees and kinds of dissatisfaction with it on the other hand. Much has been very rightly said about the need of overcoming internal inflation in the deficit countries. The effects on the balance-of-payments position, once this was done in Western Europe, were striking. This is the familiar process of adjustment to external forces through internal change. But it hardly justifies the view, in any but a very doctrinaire sense, that the dollar shortage could have been cured at any stage by simply cutting off the dollar aid. External deficits were at once a cause and an effect of the inflation, and without external aid, no politically or socially tolerable internal adjustment could have been made.

The point at issue here is one of international trade theory. What the classical economists did not recognize is that there are limits of productivity and real income beyond which international trade adjustment through the play of internal forces cannot, in the general interest, be tolerated. That we in our time do recognize this fact is shown in various ways: by our greater emphasis on international investment (and even grants), by our much greater awareness of the importance of the terms of trade, by the modern insistence on internal high employment, and by our recognition of currency devaluations as in some circumstances the preferable, or unavoidable, method of adjustment. Do not such qualifications leave wide open the question of how much emphasis to put on internal and external forces? And is it possible to embrace them all in any systematic theory?

III

Besides the distinction between long and short run, but interwoven with it, is the effect of wars. Could it not be said that war has been, overwhelmingly, the source of the really serious maladjustments, seemingly intractable at times but still short run in the sense that we have only to recover from them in order to see emerge once more the "eternal verities"? Even allowing for the undoubted fact that wars do change the "equilibrium position," this would still leave the fundamental theory intact. But there is much in the literature and in the facts which suggests that this answer provides too easy a way out. I am much impressed, for example, by the fact that the deterioration of multilateral trade was much greater in the thirties than in the twenties, and stemmed much more from the Great Depression than from the first World War. Of course, if we could ascribe the depression to the war, we would complete the circle; but this again seems to me too easy, and I have regarded the depression, particularly in this country, as due primarily to internal causes.[7] A more tenable view is that the wars hastened a process of change already under way, and by completing the destruction of the nineteenth century pattern of trade revealed deep-seated international maladjustments which had their beginnings much farther back.

I have long been impressed by the relativity of economic ideas and principles to changing conditions. On this ground any system of universals (eternal verities) is suspect. It was on this ground that Keynes attacked Ricardian economics; and it is on this ground that we today may question Keynesian economics.[8] International trade, looked at over time, provides a particularly fertile field for this kind of questioning. It has been a process of growth from a center in which the trading countries outside the center have owed the development of their trade, and indeed their very existence, to the movement of factors from the center; and the center countries have in turn owed their development primarily to this movement. Any theory of international trade which does not approach the subject matter in this way must have very serious limitations as a guide to policy. Western Europe created the modern world and was in turn remade by it. The internal mobility on which traditional theory is based was itself a product of external trade, including pre-eminently the external movement of capital, labor, and entrepreneurship to produce the goods which comprised the trade. Such a world was inevitably heterogeneous, with countries in markedly different stages of development and subject to markedly different conditions as regards relative internal and external mobility of factors.

---

[7] Cf. my paper, "Economic Lessons of Two World Wars," *Foreign Affairs*, October, 1947.

[8] Cf. my paper, "An Appraisal of Keynesian Economics," *American Economic Review*, May, 1948.

In such a world there was much room for cumulative processes of change. The old analysis of the barter terms of trade, concluding that an investing country, for example, must worsen its terms of trade, entirely missed the cost and productivity effects of the investment process, on both the lending and the borrowing countries. Foreign investment is a dynamic process which operates on both ends, and there is no ground for saying that it (or labor migration), without reference to the particular case, tends to equate factor returns or the benefits from trade (and of course much less ground for saying that trade in goods will do so). Particularly is this true if we take away the further Ricardian assumption about given amounts of factors, and count among the potential factors not merely physical resources awaiting development but also the potential technological developments. In this context, also, the assumption of constant cost seems peculiarly inapt, and with that, as Allyn Young showed, goes much of the traditional theory's reliance upon inherent equilibrating tendencies.

Associated with such changes is the development of the pattern of trade, which is a product not only of the natural distribution of resources but of commercial policy, investment, labor movements, trade and financial organization, and everything that has gone into the making of the history of trade. Hilgerdt has described how slowly the nineteenth century pattern emerged, mainly about England as a center. He characterizes it as a "formation only about three generations old," and describes its marked deterioration in the last generation, particularly in the thirties.[9] One of the questions most debated in recent years, especially in the discussions of the dollar shortage, has been the role of the American economy in the deterioration process. In the earlier nineteenth century stages, when our development absorbed European labor and capital at better returns than they could find at home and at the same time provided an expanding market for European manufactures in exchange for our food and raw materials, the results were mutually beneficial, and were part of the great dynamic changes which through their successive phases of colonization, commercial and industrial revolution, and expansion of complementary trade between Europe and the widening exterior have created our modern world.

---

[9] Folke Hilgerdt, *The Network of World Trade* (Geneva: League of Nations, 1942), pp. 84, 89.

But in its later stages our development has presented a growing threat of chronic world imbalance. Occupying a great and diversified land area, the United States has developed a rounded economy, marked by rapid technological progress, on a scale never previously witnessed. It now produces over 40 per cent of the world's manufactures but still relies predominantly on home supplies of food and raw materials. Over the last hundred years our imports have declined from about 10 per cent to less than 5 per cent of our national income, compared with percentages of 10 to 30 or higher for Western European countries. From the 1870's until the last war, United States imports of manufactures dropped from about 38 per cent of all imports to less than a quarter, while manufactured exports grew from about one-seventh of all exports to about one-half. In the process, the United States has looked increasingly to the non-European world for imports, largely in direct exchange for exports, and the share of Europe in the United States trade has undergone a pronounced secular decline. The effect of the war has been to accentuate this shift, with the result that since the war the United States has been getting not only the bulk of its food and raw material imports from outside Europe but also a substantially larger part than previously of its manufactured imports, while the proportion of manufactures to total imports has diminished further.

I have long puzzled over not only how such phenomena can be reconciled with traditional theory but, what is more important, by what measures maladjustments of this character can be resolved. For one thing, this is surely not the many countries case with which the modern theories deal, but the case of the one against the many. If our development only indicated an increasing trend toward autarchy, it might suggest that with Europe rehabilitated by the Marshall Plan (and apart from the new threat of war) there might be room for the rest of the world to achieve viability within itself. This is the case for the much discussed "two worlds." But, even though the discriminatory policies which such a view envisages were carried much further than they have been, it would still in all likelihood be true that the outside world's need of our markets and of our exports would be so great that changes in the volume and in the terms of trade, though they might have compara-

---

tively small effects on us, would have greatly magnified effects on others. If our objective is a better balanced world, we must reverse our tendencies toward autarchy by conscious policies of a more complex and sophisticated kind than those derivable from traditional theory.

One of the most difficult aspects of the problem of change over time is that progress in comparative productivities must be regarded as a race. Since the war, with external aid, Western Europe has made substantial progress not only in volume of output—now more than 20 per cent over prewar—but also in productivity. The American economy, however, cannot be expected to stand still, and we shall probably continue to be confronted with the question of comparative advances in productivity over time. Foreign investment, as I indicated earlier, is not necessarily an answer to such a problem. In the nineteenth century, the great movement of capital and labor to this country did not tend to equalize incomes internationally, but greatly contributed to the geographical expansion of the American economy and set in motion a cumulative rise of productivity, creating even greater disparities in incomes. But in a later phase it could well occur that foreign investment might stimulate a more rapid rate of advance of productivity in the lending country than in the borrowing countries, and thus create further disparities of income. Basically, what the world now requires is a flow of American capital accompanied by a flow of European exports. Such a development is not only unprecedented historically, but presents new and complex theoretical problems. It is not a question of "tied loans" but of an organic relation between the flow of capital and of goods. The danger lies in a further strengthening of trade ties between the United States and the less developed parts of the world, leaving Western Europe in a backwater.

From this point of view it would seem advisable for Western Europe to co-operate as fully as possible with her own resources in international investment, as Britain has been doing in the sterling area. As regards American investment, it is quite unlikely that the main reliance can be on private foreign investment. A part of our puzzle has been that, while the role we should play in the world is that of creditor country, the conditions are often more favorable for investment here, not only for Americans but for others. The history of the interwar period is full of perverse capital movements of this kind, which disturbed rather than restored international equilibrium. The kind of development program now needed for a better balanced world would require planning, whether or not we like that word, because it would not be at all certain otherwise how the parts might fit together.

The classical economists would dispose of differences in comparative productivity by having them reflected in comparative money wages and prices. Once this process is worked out, no trade problem remains; the trading countries have comparative cost differences which result in balanced trade. But the difficulty with such reasoning is its static character. Once time is introduced and the possibility of divergences over time, the traditional explanation of how adjustment comes about, through money flow and its effect on comparative price levels or through income changes, misses the point that these adjustments would be at the expense of real income, the only corrective (in a free market) being reverse order changes in productivity—or a division of the world into hard and soft currency areas. The classical economists got round any such difficulties by not seeing them as possibilities; with them the costs and terms of trade were fixed and predetermined. There is an element of illusion involved in making comparisons in which physical productivity differences are washed out by cost and price differences. By such analysis one could doubtless, at any point of time, draw up tables indicating which goods (barring tariffs or other interferences) countries should buy and sell. But over time, if there are divergent rates of growth of productivity, the trade will be progressively less favorable to the countries less rapidly advancing in productivity. Thus there develops a question as to how trade can be equilibrated at a tolerable level of real income.

One important aspect of this kind of analysis is the effects of such processes upon countries, such as those of Western Europe, which in an earlier phase themselves experienced cumulative advantages from trade. This reminds me again, as it did in my old paper referred to earlier, of Mill's comment on Adam Smith's "vent for surplus" principle of foreign trade, which he characterized as a "surviving relic of the Mercantile Theory":

> The expression, surplus produce, seems to imply that a country is under some kind of obligation of producing the corn or cloth which it exports; . . . if prevented from exporting this surplus [the part not consumed at home], it would cease to produce it, and would no longer import anything, being unable to give an equivalent; but the labor and capital which had been employed in producing with a view to exportation would find employment in producing those desirable objects [previously] brought from abroad; or . . . substitutes for them. . . . And capital would just as much be replaced, with the ordinary profit from the returns, as it was when employed in producing for the foreign market.[19]

But of course the difficulty is that countries such as England or those of Western Europe have specialized over a long period in production for world markets, fostered by export of capital and labor, and have thereby been able to concentrate capital and labor on a small amount of land (resulting in a population density now four times ours) in increasing return industries and to buy the products of increasing cost industries from abroad. In the process they have reaped enormous cumulative advantages of territorial division of labor; but in doing so they have become committed to a particular organization of their productive effort. What Mill failed to see was that, in a later phase of change, as such countries lose their initial advantages and foreign markets are cut off or seriously reduced through the growing productivity advantages of other countries developed in the process, it becomes increasingly difficult to find alternatives, either domestic or foreign. This is the basis of the urge for European integration, which has been present under some form or name ever since the Marshall Plan began, and has found expression in such ideas as "the one big market," "co-ordination of investment," the Schuman Plan; and on the monetary side the European Payments Union. These are surely not short-run problems or short-run solutions.

---

[19] J. S. Mill, *Principles* (Ashley ed.), Book III, Chap. XVII, pp. 579-580.

IV

Though I may be exceeding my allotted space, I must say something about the short-run problems. I have already mentioned the Great Depression and its effects on world trade. During and after the depression we witnessed a renewed collapse of the gold standard and a wave of currency depreciations, the beginnings of the drive for internal stability at full employment, and, closely related thereto, the growth of external controls, bilateral trading, and discriminatory practices, which even before the war had gone far to undermine the kind of trading that traditional theory assumes.

The over-all result has been a changed conception of how world trade stability must be achieved. Instead of adjustment through internal change, there has developed the view that external stability must depend on maintenance of internal stability at full employment in the leading countries, and particularly in the United States. In the ITO discussions there was much insistence that countries could not adhere to a multilateral trading system without some kind of guaran-
tee of stable high employment in the United States, and many of the
scape clauses" in the Charter stem from this view. Since the war we
had further striking demonstrations of how fluctuations in our
my produce magnified effects throughout the world. Our very mild
n of 1949 created a new reserve crisis in England and the sterling
quiring drastic cuts in imports from us, and precipitated the
le series of devaluations relative to the dollar (which probably would have been necessary in any case). Since then, owing partly to the devaluations and partly to the boom here, accompanied by stockpiling and other preparations for defense, we have seen another great turn of the wheel. Our huge postwar export surplus has disappeared;

we have lost substantial amounts of gold; European reserves, especially Britain's have been built up; and ECA aid to Britain has by mutual consent been suspended.

There is not space to discuss, as I recognize the theme of my paper would logically require, how much of this improvement may be permanent and what the implications would be for theoretical analysis. Even less can I discuss the new threats to European viability now arising from the military program. But what is clearly indicated by the experience of recent years is the magnitude of short-run changes and their close relation to changing conditions here. One aspect of this is again the difference between a world with one predominant country and the traditional conception of many countries mutually held in balance through compensatory internal adjustments. But there is also the profound change in the attitude of many countries toward internal adjustments.

For the classical economists the problem of full employment did not exist, since they assumed it away and discussed international trade only from the standpoint of best application of resources, given and in use. Full employment theory and policy in our time have been developed as "closed economy" economics, and the reconciliation, I feel, has never satisfactorily been made. As I said earlier, Keynesian economists have further emphasized equilibrating tendencies through income changes, even if prices are insensitive. But by putting the primary emphasis on internal stability at high employment and on "effective demand" as the guide to internal policy, they have gone to the opposite extreme from the classical economists, who made external equilibrium depend upon the free play of internal forces.

Carried to its logical results, as Keynes in an earlier phase in his thinking was quick to see, the emphasis on internal stability (for countries much subject to external strains) would mean striving for national self-sufficiency, or at least for an economy sheltered by some kind of combination of direct external controls and of successive currency devaluations which would, while preserving internal rigidities, enable country to break off from and tie on to external price levels, gain temporary trade benefits (if others did not retaliate) but at the of inflationary pressures which might undo them. Keynes in h phase had gone a far cry from this, the Keynes who insist exchange-rate changes must be the rare and last resort, or the of the posthumous article.[11] Perhaps had he lived his next effort have been the reconciliation.

Though no satisfactory way out, in my judgment, has been found, ing, etc. It is also alleged that, when the level of taxation exceeds a critical height, inflationary pressures prove, historically speaking, irresistible. On the basis of case studies, Colin Clark set the critical limit at 25 per cent of the national income.[2] Opponents of high taxation have eagerly seized upon this article and the 25 per cent figure for purposes of propaganda. However, Clark's case studies are not entirely compelling. Above all, he admits that this limit may gradually rise "as time goes on and as real standards of living rise."[3] These adverse effects are expected to engender a critical impact on productivity when income redistribution is effected on a large scale. The higher the degree of redistribution the greater is the adverse impact assumed to be.

---

[11] J. M. Keynes, "National Self-Sufficiency," *Yale Review,* 1933; and "The Balance of Payments of the United States," *Economic Journal,* June, 1946.

At this point in the customary analysis, clarity of statement and agreement give way to vagueness and disagreement. The drag on productivity over time is variously said to become critical when production or productivity declines or, using a different standard, when the growth of productivity is "checked" or "materially checked." In more extreme pronouncements, it is said that heavy taxation, as current at present, is a device for the "destruction of the market economy."

Most of the fear of redistributive finance is fear of high taxation levels. These may or may not result from income redistribution. In those Western countries where such redistribution is undertaken on a large scale, high taxation results only in part, and perhaps in a lesser and diminishing part, from redistribution. This is so not so much because expenditure on defense, the servicing of the public debt, and public investment are high but because the fraction of the national income which can possibly be redistributed is necessarily small. In postwar Sweden, a country noted for a high level of redistributive finance, about 10 per cent of the national income was transferred from the rich to the poor. In 1937, when unemployment was high, less than 13 per cent of the British national income was transferred from those earning more than to those earning less than £250 per annum and the latter
roup paid in taxes very nearly as much as it received from public
penditures. As welfare expenditures rise to very high levels, they
resent more and more redistribution within the lower income groups,
one hand, and an extended substitution of the consumption of
for private goods and services, on the other hand. In the United
, for instance, the cost of postwar food subsidies and increased
education expenditures are covered by additional payments
working class in indirect levies (especially increased to-
er taxes) and increased direct transfers received by the
re met by higher direct taxes. Under these circumstances,

---

nd Changes in the Value of Money," *Economic Journal*, 1945, pp.

the adverse effects of redistributive finance should be, more properly, attributed to the fact that, with a lesser degree of income redistribution, the lowest income groups could contribute more toward covering nonwelfare public expenditures.

As taxation and redistributive measures have risen in the past, there have always been statesmen and economists who predicted that the fatal impact was at hand, and there is no lack of diagnoses now according to which the fatal degree has been reached in this or that country. Past Cassandras, however, have been invariably proven wrong by events. Productivity has continued to grow despite increasing taxation. This historical fact does not prove, of course, that present-day prophets of doom are also in error. Yet it counsels caution; and most economists, while utterly confident that there is a fatal degree of taxation and income redistribution, content themselves with the common-sense prognostication that every increase in redistributive finance brings us nearer to the fatal limit, wherever it is. With his inimitable forcefulness, D. H. Robertson mused some decades ago: "[Mr. Wedgwood] does not cure me of the fear that at some point on the road to Equality the whole curious bundle of convention and urges making for accumulation must suddenly crumble—that the ants, vicarious and others, will suddenly wake up, rub their eyes, cry *Cui bono?* and skip off into the forest." (*Economic Fragments*, page 190.)

If, at this level of generality, such is the customary argument establishing the incompatibility between the operation of a liberal economy and a high degree of redistributive finance, then it is astonishing that it is expounded by so many economists so confidently and at so many occasions, and this all the more because economists, bent on specific aspects of the case, have for long pecked away at its foundations. Upon closer inspection, the formula is found rather empty and loses substantially in applicability once the limits of its significance are revealed.

The first difficulty is that there is no satisfactory way of definin the fatal impact expected from supposedly excessive taxation and distributive finance. Is it declining productivity or stationary prod tivity or a decelerated rise in productivity? Even if we assume Western societies certainly want the fruits of increasing produc we do not know with how much of a decelerated rate of grow ern societies are content. This obviously involves a politic based on the simultaneous pursuit of conflicting goals. S has instructed the economist to take it for granted, as he that maximum economic progress is the overriding soci

Were a definition of the "danger point" given, in ter increase of productivity (which is impossible), it wou help in predicting when the danger point is reached no statistical index of the disincentive effects of "excessively" redistributive finance. Although secular increases in such finance have been accompanied by rising productivity and although record heights of taxation in postwar Britain and Scandinavia have patently not precluded impressive advances in productivity, it cannot, of course, be inferred that disincentive effects have not acted as a drag on such progress. Rising productivity is after all also a function of expanding productive capacity and this expansion, in turn, depends only very partially on incentives upon which a high degree of redistributive finance may encroach. In these circumstances, however, we cannot assert that the impact of blunted incentives has been "fatal." On the contrary, it might be concluded that this impact, thus far at least, cannot be significant if it takes very refined techniques to discover whether or not efficiency has suffered.

When it comes to adverse effects of a high level of taxation and redistributive finance on particular incentives, it is immediately apparent that our knowledge of these effects as of the matter affected is at present severely limited. Only passing reference can be made to some of these limits. It may be taken for granted that some taxes have no incentive or disincentive effect at all, as, for example, taxes on windfall profits. It is a bit more dubious to assume flatly that indirect taxes have no or only negligible effects on incentives. Still more controversial is the problem of the incidence of income taxes. It is frequently assumed that these are borne by the taxpayer. Yet much of the customary deductive reasoning on incentives would be seriously discredited if it is true that the "burden" of income taxes is often shifted.[4] Disincentive effects on work effort, mobility, and acquisition of skills are likely to vary greatly between income groups, skill groups, and individuals. Heavy taxes may indeed have a positive incentive effect on persons whose elasticity of demand for net income is great in terms of effort. High tax rates may clearly stimulate efforts on the part of the more or less "idle rich." The main difficulty, however, resides in the complexity of the incentive structure. To speak about incentives affecting productivity involves speaking about human motivation affecting productivity. Human motivation is highly mixed, involving many relevant nonpecuniary motives in addition to the income motive. By now we are quite familiar with the kinds of nonpecuniary motives at play in any work situation. It is not only that work, effort, and productivity may be intrinsically interesting—and especially at the higher income levels; there are also important considerations of respect, prestige, and power which afford strong motives for effort. The decisive question is this: just how important in the entire incentive structure is the income incentive in exacting effort? The plain fact is that we do not know the answer to this question, that we know next to nothing about the weight of different incentives, and that economists have neither received nor requested much help from anthropologists, psychologists, and sociologists who might be able to enlighten us. And this ignorance is in strange contrast to the eagerness with which the disincentive effects of taxation are usually predicted.

---

[4] For a recent study on incidence, see L. H. Kimmel, *Taxes and Economic Incentives* (Washington, D.C., 1950).

Similar considerations apply to the special effort of the innovating enterpreneur. Here, also, other motives than the profit motive are know to be at play. The game or gambling aspect of risk-taking has been emphasized by many economists. It is indeed argued that this gamble requires disciplining in the general interest and that some deterrent against the more uncertain and risky commitments may well be desirable. Again, we do not know in these circumstances whether even a high rate of taxation seriously blunts the incentive to make venturesome investments. There is general agreement, however, that many tax systems penalize speculative enterprise unnecessarily by their niggardly treatment of losses. The deterrent expected from such discriminatory taxation does not then result primarily from the level of taxation but from specific taxing techniques which could be altered without involving any sizable loss of revenue.

Some economists hold the view that among the various negative effects of high taxation and redistributive finance only one is really important, and that is the negative effect on saving. But here again the trouble is found far less in any impairment of the incentive to save—which impairment also can be mitigated by modifying the prevalent methods of taxation—than in a reduced ability to save. It is obvious that progressive taxation diminishes the ability to save of the higher-income groups, and it is plausible that this reduced saving ability of the higher-income groups is only partially offset by an increased ability to save and increased savings by the lower-income groups.

From foregoing considerations a number of inferences can be drawn about incentives. Clearly, we know very little about productive incentives in general and still less about incentives in any concrete situation. All that psychologists and anthropologists can tell us at present is that the incentive situation is exceedingly complex. This underlines the advisability of caution when it comes to making generalizations and predictions. But the following propositions and queries seem justified.

1. While the gross income differentials produced by the liberal economy might well be necessary in order to stimulate maximum productivity if man were only economic man, these reward differentials probably are unnecessarily and wastefully high in any society which fosters other important motives making for high productivity.

2. We must admit the possibility of autonomous changes in non-income incentives which might either reinforce or counteract whatever disincentives originate in high taxation levels as well as of other changes in the economic and social environment which strengthen or weaken the incentive effects of a given income reward.

3. While the disincentive effects of high levels of taxation and distributive finance are difficult to predict and, in general, are probably smaller than is usually assumed, the possibility of such disincentive effects cannot be denied and they may become important if income rewards are too radically divorced from productive effort. Beyond this, any more definite answer is impossible in the abstract and must depend upon particular circumstances. However, one may hazard the following expectations: the possible disincentive effects of any rise in taxation or advance in redistributive finance will vary between persons of different income group, occupation, status, personality, etc., within the same society; from society to society on account of different cultural and political conditions; and over time. The latter point is perhaps worth special emphasis, for it is possible that the immediate disincentive effect is not fully sustained over a longer period of time. In other words, that a sharply reduced income reward may become accepted gradually as "normal."

4. To the extent that reducing income-reward impairs productive incentives such effects can be minimized. At any given level of taxation and income redistribution, they can be minimized by manipulating specific techniques of taxing and spending.

5. To the extent that high taxes curtail the ability to save, a real problem exists. But it would be rash to proclaim the incompatibility of a high level of redistributive finance and a liberal economy on this basis. Surely few people believe the chief virtue of the liberal economy to reside in the rate of capital accumulation which would evolve under conditions of low taxation. We have no right to assume that only the maximum rate will do and might well question, as D. H. Robertson did, our "blind fear of doing anything which may make that proportion less than it would otherwise have been." (*Economic Fragments*, page 41.) The question of the desirable rate of capital formation is essentially political and, as such, is of a different order than the question of how many shirts should be produced or exported. If this proposition is acceptable, then the question arises whether budgetary provision for public saving should not be called upon to fill any possible gap between private savings and the desired rate of net investment. Such provision need not mean an increase of public investment or of public controls over private investment choices. As a rational alternative to retrenching high tax levels, this might commend itself for two reasons. On equity grounds, the necessity to restrict income redistribu-

tion is averted. Secondly, if solely the ability to save is in question, ie-
seems irrational to provide for income inequality on this account. uc-
then appears that it is the low-income groups which actually (in te that
of foregoing increases in consumption expenditures), though not tivity,
ally, do the saving. Since the higher-income groups will not saveh West-
extra income that accrues to them from increased income ial decision
this method of exacting savings might indeed be called a warely no one

While the adverse effects of high taxation levels and incos wont to do,
bution on production incentives are, in the aggregate, ual objective.
may be small over a very wide range of increasing tans of a minimum
verse effects on productivity are still smaller and, exceld still be of little
high taxation and temporarily after tax levels have for there can be
stantially, are likely to be more than offset by other effect
utive finance which tend to augment productivity and possibly also tend to reinforce incentives. For a long time, it has been recognized that several important kinds of welfare measures tend to increase productive capacity. Thus measures of public health, nutrition, education, training, etc., as well as higher consumption levels of the lower-income groups, to the extent that they result from measures of income redistribution, enlarge the productive capacity, the supply (for example, by reducing the number of workers and working days lost through illness, by lengthening the working life of the working population, and by releasing women from housework in marginal cases), and the mobility of labor (not only on account of employment exchanges but directly as a result of education and training opportunities); that is, of the majority of the working population. To that extent, redistributive finance obviously is in the nature of investment and need not be demanded or defended on equity grounds. In its effects on productivity, investment in skill resources and in conditions favoring mobility does not differ from investment in plant, equipment, and inventories. It is perhaps largely because investment in human resources is incapable of statistical measurement and does not enter our national income accounts, that economists have been perennially preoccupied with incentives and have neglected these important changes in productive capacity upon which incentives operate. Clearly, reduced incentives may yet exact increased productivity if they operate on increased productive capacity. Whether the net effect of varying levels of redistributive finance is negative or positive is not, of course, calculable. Much depends upon the composition of welfare measures and a host of other variable circumstances. Much depends also upon the time period considered, for the full beneficial effects of redistributive finance are likely to accrue only slowly. While some economists guess that the positive effects will only partially offset the negative, others have expressed themselves to the contrary.

Redistributive finance, moreover, may enhance the productive capacity of society in still other and more subtle ways. By multiplying the opportunities of the young for acquiring various skills, redistributive finance facilitates a quicker circulation of the professional, technical, and business elites than would be possible in its absence, thus increasing the supply and mobility of skill resources at the higher echelons in the economic system, with results which tend to augment the economic productivity of the system. To quote D. H. Robertson once more:

> . . . the future of the supply of first class business management in this country depends perhaps less on the future level of business salaries and profits than on the extent to which we choose to divert systematically into business channels our notable supplies of the temperament which finds its meat and drink in the taking of momentous decisions, and for which parts of our public service have long been renowned. (*Economic Fragments*, page 19.)

Without deliberate public provision for facilitating this process, the hereditary principle which governs the transmission of wealth and business control under capitalism leaves too many business decisions to "third-generation men" whose position depends upon antecedents rather than ability.[5] In conclusion, the liberal economy, which highly rewards scarce skills, is too slow in reducing the scarcity of skills and often rewards those in high position as if they commanded these positions on the basis of their skill though they may occupy them for extraneous reasons. Redistributive finance, on the contrary, permits competition to pick its winner from an enlarged field of contenders.

Finally, redistributive finance tends to strengthen nonincome incentives toward productive effort. This may follow in part from broadening the avenues toward success. Holding out prospects of success to a much larger number of the younger generation may well set in motion incentives which would otherwise lie dormant. To be set against this positive effect is the disincentive effect produced by disgruntlement and bitterness of the former ruling groups in business and in the professions. As regards the majority of the working population, it is possible that healthier and better fed and housed workers will be "happier" workers and that "happier" workers may be more susceptible to productive incentives than "unhappy" workers. Finally—and this is stressed by observers in the Scandinavian countries where redistributive finance has gradually reached very high levels—working morale (and with this the incentive situation) is improved by a lessened hostility to and an increased acceptance of what is still basically a liberal economy.

In conclusion, it must be conceded that we know no more about the precise positive effects of redistributive finance than we know about its adverse effects, and we know still less about its net effects. This unfortunate circumstance leaves plenty of room for controversial opinion. It is my feeling, however, that among liberal economists opinion has not been controversial enough, especially when it comes to policy advice. Taking all factors into consideration, who can be certain that even the highest levels of redistributive finance ever known (as in Britain and the Scandinavian countries) will in the longer run slow down the rate of increase in productivity? In wealthy societies it may well be the other way around. To be sure, the possibility of impaired incentives is real enough to counsel against "uninstructed benevolence."[6] What needs more widespread realization, however, is that the case for redistributive finance is not only strong on equity grounds but also defensible on efficiency grounds. On neither ground, and certainly not on the latter, need the case for redistributive finance therefore be a socialist case. It is precisely the one-sided orientation of most liberal economists which has made it gratuitously a socialist case. If redistributive finance is properly managed, it is likely to strengthen and revitalize the case for the liberal economy as a system for directing employment under conditions of political freedom. Redistributive finance is apt to change some aspects of the liberal economy in that its articulation will be less than formerly determined by the traditional forms of transmitting wealth, skill and influence of historical capitalism. To the extent that capitalism is the "civilization of inequality," as Schumpeter stated,[7] radically redistributive finance will certainly impair it. The liberal economy, however, is not identical with a particular historical manifestation which it once assumed. Its virtues as a decentralized system of resource allocation, affording scope for individual initiative, preserving the domain of economic freedoms and minimizing the need for government authority, remains intact. There need be little incompatibility between the liberal economy and redistributive finance, and even that very limited degree of incompatibility can be controlled if all relevant conditions in the situation are taken into account and if such control is desired.

---

[5] J. M. Keynes, *Essays in Persuasion* (London, 1933), p. 327.

[A section of this paper, dealing with direct welfare controls, has been deleted for the purpose of conserving space.]

IV

My final question is whether or not welfare measures are compatible with participation in a relatively liberal system of international trade. The answer to this question is already contained in my preceding observations. In principle, there is no reason why high levels of taxation and redistributive finance should be incompatible with participation in what has been called "an open system" of international trading. In fact, of course, a sharp rise in levels of taxation and income redistribution may impose upon a country the necessity of special adjustments in its trade and payments position. Thus income redistribution will certainly alter the structure of demand for foreign goods and for exportable goods. Whether or not it will lead to a net shift of demand from domestic to foreign goods and services or vice versa cannot, of course, be predicted in the abstract. In Western Europe income redistribution may increase the demand for such foreign goods as coffee, films, animal products, and tobacco. But it may also increase the demand for housing, medical care, and other domestic products. The net effect is unpredictable. Again, income redistribution may, although it need not, increase the aggregate money demand in the economy and thereby generate an increased demand for imports and exportable goods. Increased tax levels and, especially, ill-designed tax methods may hit the competitive capacity of marginal enterprises and industries. Should redistributive finance retard increases in productivity—which cannot be flatly assumed—countries with a speedier rate of progress may impose upon the lagging countries the burden of adjusting to changes in comparative-advantage situations. If high levels of taxation and income redistribution lead to decelerated capital formation and a lessened degree of factor mobility—another assumption which cannot be flatly made—a country may find it more difficult than otherwise to adapt its industrial structure to changes in its trade and payments position. If balance-of-payments disequilibrium necessitates that a country must reduce real income levels or money income levels (at existing foreign exchange rates), the required adjustment may be politically more difficult to undertake if it is not to bring about a less equal division of real income. However, there is nothing in the nature of these and similar problems which compels a country to retreat from participation in an open system of international trading. But the indicated problems of adjustment to change are real enough even though their burden is reduced because advances in the level of taxation and income redistribution are a world-wide phenomenon. There is, however, one additional problem and that is the incentive given to capital flight from countries with relatively high levels of taxation. Since present-day conceptions of a liberal trading and payments system accommodate—as exemplified in the Charter of the International Monetary Fund—government regulation of international capital movements, this problem is deprived of major significance.

---

[6] Edwin Cannan, *A Review of Economic Theory* (London, 1929), p. 413.

[7] "The March into Socialism," *American Economic* Review, May, 1950, p. 450.

Again, direct welfare controls impinge far more directly on a country's ability to participate in a relatively liberal international trading and payments system. The use of import restrictions as a means of redistributing real income in favor of industrial labor is a case in point. The use of subsidies for the purpose of holding down the price of imported foodstuffs is another, since it may involve rationing of imports and possibly makes state importing administratively desirable. The point need not be further belabored. But it may be worth while observing that it is persistent balance-of-payments difficulties, resulting from other causes than welfare measures, which chiefly account for the spread of quantitative import controls, although these controls are also employed for the purpose of avoiding a redistribution of real income to the disadvantage of lower-income groups.

V

By way of conclusion, I begin by repeating that the so-called "welfare state" need not be the antithesis of the so-called "liberal economy." Whether they will be is much more a function of the form of such measures than of their extent and also of a host of other variable circumstances to which allusion has been made in this paper. What is perturbing is the habit of many economists to offer confident judgments on the effects of redistributive finance although these judgments are based on dubious premises. As long as such economists stick to a priori theorizing they are at liberty to use any premises they choose. But when such judgments involve policy advice, it becomes important to recognize that this use of the traditional premise may lead these economists to confuse logic and reality and to mistake fancy for fact. In doing so, they lend an apparently scientific basis for political arguments which are actually based on sectional self-interest. As Cairnes remarked a long time ago, such theorizing amounts "to a handsome ratification of the existing form of society as approximately perfect."[8]

Nor, as far as redistributive finance is concerned, are those economists right who simply throw up the sponge by declaring that the problem at issue is one of politics or ethics. It is, but it is also a question of economics to the very relevant extent that redistributive finance may increase productive capacity and strengthen productive incentives as well as impair them. By focusing on the adverse and neglecting the favorable effects of income redistribution, they have left to socialists the demonstration of these obvious favorable effects; thereby contributing to the false appearance that the issue involved is basically one of socialism versus individualism. One British economist has said that the increase in welfare measures amounts to the "restoration of the Commons to the people."[9] The question is whether this restoration makes sense not only politically or ethically but also economically.

---

[8] J. E. Cairnes, *Essays in Political Economy* (London, 1873), p. 260.
[9] D. H. Macgregor, *Public Aspects of Finance* (Oxford, 1939), p. 55.

PROBLEMS OF TRADE BETWEEN PLANNED ECONOMIES

By MICHAEL L. HOFFMAN
The New York Times

In any discussion of a topic as broadly defined as I understand this one to be (relationships between planned, socialistic, or "bulk purchasing" economies was the way Professor Knight's letter to me put it), it seems desirable at the start to introduce some order into the matter by attempting a little classification. As I am not going to develop any theory but only to try to perform the more humble task of recording some of the experience of Europe in these past few years as I comprehend it, a good deal of what I have to say could be said without benefit of any subdivisions. As many economists before me have suspected, government conduct of economic affairs seems to give rise to curiously consistent difficulties whatever form that activity may take and whatever kind of government is involved.

Nevertheless, it seems useful to distinguish to begin with, first, the problems of trade between economies in which free enterprise has simply ceased to exist (totalitarian economies), second, the problems of trade between those countries and others, and, finally, the problems of trade faced by partially socialized economies which practice state trading in some fields but not all, both among themselves and with "enterprise" economies.

Most socialist writers, as far as I am aware, who wrote about trade between socialized states before there were any socialized states or when there was only one, treated the whole matter, if at all, as an afterthought—something that would take care of itself. It seems to have been taken for granted that trade would develop as an inevitable complement to the decisions of intelligent planners trying to put national resources to their best uses. What might happen if intelligent planners differ in their views about trade, retaining enough of the Old Harry to behave occasionally like a man trying to make money on a deal, or if planners were not guided mainly by intelligence—these eventualities do not seem to have concerned them. Other writers, notably Professor Viner, have considered the various factors likely to determine the nature and development of trading relations between socialized states mainly in terms of the probable instability of prices that would result from two monopolies dealing with each other and of the problems arising from the absence of any code of conduct to govern such trade relationships.

Professor Viner, in an article written in 1944,[1] has especially developed the thesis that international economic relations are likely to be more disturbing to the peace when conducted largely by governments than when conducted largely through private trade.

In fact, from what we know about trade among the completely socialized states of Eastern Europe, none of the things particularly emphasized in the literature seem to be among its outstanding characteristics.

There was a time during the early years after World War II when it was possible for Western observers to write of trade within Eastern Europe as being based on "a plan in the genuine sense of a positive conception of its own regional development in terms of living standards and the machinery necessary to carry it into effect."[2] There were honest and competent officials in Eastern Europe (all whom I knew, at any rate—now unfortunately no longer in a position in which their views count) who thought this is what they were going to do with the vast and unchallengeable power to direct resources seized by the new governments of those countries. People talked of "raising planning to the international level"; some people in the West, I fear, still do.

This is a pretty meaningless concept. It has little relation to what goes on in Eastern Europe today. The outstanding characteristic of trade relations among Eastern European countries is that they are completely dominated by the Russian Government and by Russian interests. The possibility that this would be the outcome of trade between completely state controlled economies was foreseen, but not, I think, emphasized, by Viner in his 1944 article. No trade agreement is made between any two countries in the Cominform group without having been approved, and often negotiated, in Moscow. The terms and conditions of trade are established by the Russian Government, not only, as the Kostov trial revealed, for trade between Russia and the satellites, but for trade between the satellites themselves.

This is accomplished partly by intervention in trade negotiations. But it is accomplished partly, and, it appears, to an increasing extent since the beginning of 1950, by requiring that trade between satellites and between the satellites and the outside world pass through Russian hands.

This is easier to manage for some countries than for others. Yugoslav official statements have revealed the extent to which Russia succeeded in forcing that country into a position bereft of bargaining power with respect to its principal exports. During 1948, under trade arrangements negotiated either with Russia or under Soviet surveillance, the Soviet Union and the satellites took 72 per cent of Yugoslavia's exports of blister copper, 72.7 per cent of her exports of electrolytic copper, 59.9 per cent of the lead, 97.3 per cent of zinc, 100 per cent of iron ore, 85.2 per cent of lead concentrates, and 57.1 per cent of zinc concentrates. In exchange for this all but complete dependence on the Russian bloc for the sale of her raw materials, Yugoslavia was to get the machinery and plant to carry out a plan of industrialization. This was mostly never delivered at all, and when delivered was sold on terms grossly unfair to Yugoslavia and was often unsuitable. Marshall Tito has charged, and his case is pretty well documented, that this trade experience was a direct result of a Russian policy of preventing Yugoslavia from carrying out her program of economic development and of forcing the country to specialize in the production of raw materials which it would have been to Russia's interest to have produced there.

---

[1] Jacob Viner, "International Relations between State Controlled Economies," *American Economic Review*, March Supplement, 1944, pp. 315-329.

[2] Doreen Warriner, "Is There a Molotov Plan?" *New Statesman and Nation*, November 8, 1947.

The process of bringing Czechoslovakia and Poland, with more diversified economies and long-established channels of trade with the West, into a position of complete dependence on the Russian state trade machinery is bound to be slower, but it is going on. Czechoslovakia, for example, receives Egyptian cotton, Malayan tin, Rumanian oil and probably rubber through her trade agreements with Russia. Many Czechoslovakian goods are delivered to Eastern Germany not directly, but by Russia, being paid for through the respective bilateral accounts with Russia.

At every stage prices are fixed in order to achieve some desired balance, surplus, or deficit in Russia's accounts with the importing country. What little information one can get suggests that Russia often makes a middleman's profit on these deals, but there is no reason to suppose that she always does so or that this is the primary objective of the system.

The conduct of trade is in the hands of state monopolies or boards which operate within the framework of agreements negotiated by governments. Unlike trade agreements in the West, these fix actual values or quantities of goods to be delivered during a period, which amounts then become part of the "plan." As we can tell from the "self-criticism" in the Communist press, these targets are seldom met. But it is the men who run the boards or the industries who suffer, not the system, nor, as a rule, the men who make the agreements.

We do know, however, that one of the charges against the defendents in the Kostov trial was that some of them sought to hold out information, in the course of trade discussions with Russia, in an effort to get more favorable terms of trade for Bulgaria than would otherwise have been established. This was held to be a crime against the Bulgarian state and the men were convicted. I suggest, as an exercise for those who still like to think of trade between socialized states as essentially a problem in duopoly, the problem of drawing curves to explain the behavior of a Bulgarian trade negotiator in Moscow.

There is a further complication. Not all the trade passes through the trade agreement machinery or, indeed, passes through the control of the satellite government at all. In Rumania, Hungary, Eastern Austria (there is no "satellite" government here of course), formerly in Yugoslavia, and latterly in Czechoslovakia important sectors of the national economy are under direct Soviet control, either through purely Russian administration, as seems to be the case with the Czechoslovakian uranium mines, or through joint Soviet-satellite companies which are actually under Soviet control.[3] These companies trade as autonomous bodies, without licenses and without any necessary relation to the trade agreements between Russia and the country in question. It seems that the satellite government often does not even know what the trade amounts to.

There is no possibility whatever, as the Economic Commission for Europe secretariat has found out after painstaking efforts, of setting forth even the main trends of trade within Eastern Europe in statistical form. Although nobody, including the delegates who make the speeches, takes seriously the endlessly repeated claims of vast progress, expressed, invariably, in terms of percentages of increase over some unknown base, we know that trade has been growing. We know that trade has been turned out of old channels toward something like a pattern of Eastern autarchy, to the accompaniment of nauseating hymns of joy issuing from the mouths of those engaged in dragging their countries down to the level of Asiatic penury. We have scattered bits of information here and there, mostly only up through 1948, indicating that this trade is resulting in greater geographical specialization within Eastern Europe. But the purpose of this specialization is not even claimed to be related to old-fashioned welfare objectives.

A country that indulges in a high degree of specialization in an international trading community in which a fair amount of competition prevails and in which prices are the principal guide to buying and selling, subjects its economic development, in a sense, to the dictates of the market, which can, of course, be harsh at times. In return it obtains a higher per capita consumption or may support a larger population or both. A country which indulges in a high degree of specialization under the system in force in Eastern Europe subjects its economic development to the dictates of a foreign political machine without any assurance that it will obtain anything at all.

---

[3] The nature and functioning of these companies was explained at length by Mr. Willard Thorp, Assistant Secretary of State, in a number of statements before the Economic Committee of the Paris Peace Conference of 1946 and on subsequent occasions by Mr. Thorp and other U. S. representatives in the Economic and Social Council and the Economic Commission for Europe.

Next to the fact of ultimate control by one government, the ignorance and blindness of the participants is, indeed, the outstanding characteristic of socialist international trade. Outsiders do not know what is happening. The people whose production and consumption are affected most by the trade do not know what is happening. The satellite governments presumably know most, though not all, of the facts about their own trade but only what they can get by espionage about the terms on which their neighbors and competitors trade with each other and the Soviet Union.

It is tempting to think that somewhere in the Kremlin a body of wise men sits around a table with all the facts before it concerning this trade and governs it according to some intelligent and consistent plan. I doubt it. I doubt if this could happen in the atmosphere of secrecy and even conspiracy that surrounds the simplest international transactions under the Soviet system. Clearly there is very little to discuss about the functioning of such a trading community as a problem in economics.

Turning to the problems of trade between totalitarian and other economies, the chief difficulty here seems to have been finding any way to conduct trade at all. The difficulties have been enormous—on the Western side, at least—in establishing new mechanisms to take the place of those that have been destroyed.

While in theory it might seem easier to find a solution in cases in which an export monopoly is selling in a more or less competitive market or selling to a number of buyers, applying the principles of discriminating monopoly pricing, in practice it seems to have been easier for Eastern European countries to develop trade with those Western countries, notably Britain, that have a relatively large number of state trading organizations or departments on the buying side than with countries like Belgium or Italy that have few or none.

There seem to have been three main reasons for this. Firstly, private traders are simply not able to stand the long periods of uncertainty and the high cost of negotiations involved in dealing with governments. Secondly, the prices of Eastern exports have generally been such that trade is not advantageous unless the buyer is in a position to achieve acceptable terms of trade by jacking up the prices of the non-totalitarian country's exports. Few private traders are in a position to do this. Thirdly, state trading organizations tend to seek longer-term contracts than private traders are in a position to make and larger quantities than private traders are in a position to contract for.

Although Britain has managed to develop trade with the totalitarian economies somewhat more successfully than have other Western countries, I do not believe her experience has been very happy. The chief characteristic of this trade is its discontinuity. Contracts are signed, goods move; then suddenly a disagreement about prices or quality arises; everything stops for months; recriminations are exchanged; importers run down their stocks; and then, finally, a new agreement is reached and everything starts over again. For more than eighteen months the British lumber control bargained with Russia over the price of Russian softwoods—at a time (1945-46) when lumber was the chief bottleneck for housing in Britain. As it turned out, agreement was reached only after prices which had nothing to do with the "cost" or world prices of timber, for a whole series of Russian purchases in Britain during the war, were negotiated. Similar difficulties arise every time Sweden, Denmark, or France negotiates for Polish coal, although the Polish coal monopoly is probably the most successful operator in Western markets.

The tendency of trade of this kind to be intermittent is one reason that its supposed advantages as an employment stabilizer for nontotalitarian countries have proved to be illusory, if not actually farcical. Long-term agreements with state trading organizations are still, nevertheless, frequently advocated and defended on the grounds that they aid in stabilizing employment in export industries.

The most famous case in this connection is that of the Russian-Swedish agreement of 1947. This was conceived by its sponsors as a kind of insurance policy against a confidently anticipated American depression. In a five-year accord, Sweden granted Russian credits of one billion kronor, in addition to undertaking to supply annually one hundred million kronor worth of goods to Russia. The credit was for electrical machinery and installations. Fortunately for Sweden, difficulties in negotiating contracts between individual Swedish manufacturers and the Soviet Government have kept Russian utilization of the credit down to about half what was anticipated. Even so, it has been an unwelcome inflationary influence and a drain on Swedish resources that have considerable earning power in free currency markets. Whether it would have been useful as a counterweight to an American recession will never be known. That it has not been a disastrous drain on the Swedish economy has been due to the fact that it did not work as expected, plus the fact that the U.S. was fortunately able, because of the Marshall Plan, to aid Sweden (directly through loans and indirectly through conditional aid under the second European payments scheme) to overcome some of her payments difficulties with the non-totalitarian world during 1949.

That long-term intergovernmental agreements might be useful employment stabilizers is not disproved by the Swedish or other experiences of the past few years. I would suggest, however, that for such a purpose they have several grave disadvantages:

First, the tying up over long periods of resources of certain industries deprives an economy of flexibility when it comes to making adaptations to changes in world trade conditions. This, presumably, is more serious for a small country than for a large one.

Second, in a period during which the problem of public economy is to restrain inflation the financing of such agreements by the exporting country adds to inflationary pressure and is, moreover (unless the agreement is broken), an inflationary factor not subject to the control of that country's government.

Third, to be big enough to be a significant factor affecting the national income such agreements must be big enough to commit a very large proportion of foreign trade (in the Swedish case more than 10 per cent of total exports). This increases the difficulties mentioned under the first disadvantage above. It is also one reason why producers tend to resent and are likely to sabotage the carrying out of such agreements which seem to them to interfere with their freedom to take advantage of changes in market conditions.

Fourth, planners (and this applies to government trading in general) are very likely to be wrong about what industries need the "protection" of long-term contracts, about the advantages of any given terms of trade one, two, or three years hence, and about most of the other variables that have to be considered in deciding whether such agreements are good or not.

There may still be cases where the combination of credit and long-term contracts would be of advantage to both trading partners. Without going into detail, I would suggest that such cases are likely to arise only when the following conditions are fulfilled: (1) The credit
granting country (presumably the non-totalitarian country) wants to
uild up a permanent source of supply for some industrial component
food, something that, come what may, it is going to need to import
finitely. (2) The borrowing (totalitarian) country is prepared to
de the desired supply on terms that compare favorably with
he commodities would cost elsewhere. (3) The possibility of
hing this through an ordinary long-term loan is not open.
orrowing country can or will only undertake to develop the
roduction if machinery and equipment are made available
d of years. (5) The equipment producing industries of
country are pretty hopelessly noncompetitive in world
protectionist policies, but for reasons of
dated and for reasons of fiscal policy

cannot readily be fully employed in production for the home market.

I would suppose that the case of Italy (as the equipment exporter) and Yugoslavia (as the supplier, after a period, of timber, metals, and food) would be one in which such arrangements might usefully be worked out.

I am afraid I have left far too little room for discussion of the only one of my categories that might provide a fruitful field for economic analysis: state trading by governments which do not seek to suppress private trade entirely—what, for want of a better term, I have called "partially socialized" economies.

Most of what I have had to say about the problems of trading with a totalitarian country applies to the state trading of partially socialized economies with others of their kind or with predominately free enterprise economies. This is certainly true of the characteristic discontinuity of the trade and of the tendency for commercial transactions and trade information to be shrouded in secrecy and surrounded with political intrigue.

The main difference, I suppose, in this set of problems is that there is a larger area of choice open to the planners. Apart from a few cases prejudiced by old political commitments, they do not have to use state trading techniques unless there seems to be some useful purpose therein. Is there anything in recent experience to enable us to say under what circumstances state trading is useful and desirable for such an economy or for a number of trading countries?

Britain is the only country in Europe that has kept state trading on a large scale as part of its peacetime apparatus. About half Britain's imported raw materials and four-fifths of her imported foods are purchased on government account. On the export side state trading has been developed only as an incident to nationalization of industries, notably coal, and presents no special interest on its own.

The Labor government's advocacy of state trading has been largely an advocacy of centralized purchasing as a means of getting foo
and raw materials cheaper than could be done by private traders. T
this is added a case for making large bulk purchases under long-te
contracts as a means of assuring supplies for considerable period
stable prices. Although these two issues have become badly mixe
the case for long-term contracts clearly rests on a much na
foundation than the case for centralized buying as such.

One would expect that a country like Britain, which is t
buyer of the products of a large number of industries in
tries, could, by acting like a monopoly buyer, obtain a
terms of trade.

There is, of course, no way of comp [illegible] ha what would have happened had the circumstances of Britain's trade been different. The only effort I know of to reach a conclusion by comparing Britain's food and raw material costs to those of other countries (made by the *Economist*) concluded that at best in the postwar years centralized buying had done no better than private purchase would have done while at its worst it had given higher costs for raw materials and possibly for food.[4] Personally, I did not find the *Economist's* analysis convincing except for one or two examples of unduly costly purchases.

It seems quite certain that in a period of suppressed inflation centralized purchase of foods combined with rationing and a subsidy system can keep a country's total food bill below what it would be if consumers' demand were permitted to be freely reflected in bids for imports. There can be no doubt, for instance, that Danish farmers could have sold their butter at higher wholesale prices in England these past few years had they been able to deal directly with the distributive trade or that Irish meat would have fetched much more than it has. And this is quite irrespective of whether or not retail price controls and subsidies were maintained—whether the English consumer, that is, paid any more. The key to the "savings" associated with centralized purchasing seems, indeed, to lie in the fact that the government can increase or decrease amounts available to the market at will and that the amounts available are always taken up. When these conditions no longer prevail, as has been true in many vegetables and fruits in Britain, waste appears and losses are incurred.

In the last analysis, the system keeps the total food bill down because of the government's ability to keep total food consumption down —below what it would be at the same set of prices if suppliers and distributors had an opportunity to deal directly. In some cases, a mere demonstration that it has this power—a strategic cut in the bacon ration—is enough to bring suppliers to their knees.

We may say, I believe, that, as an adjunct to rationing, price con-[illegible]ol, and subsidies, centralized purchasing may be a useful technique [illegible] reducing the total food bill. But I am at a loss to know whether [illegible] throws any real light on the value of state trading as such for [illegible] it is the fact that the system as a whole operates to restrict [illegible]tion without using the checkrein of prices that produces the [illegible]he case for centralized purchasing reduces to this, I doubt [illegible]e much appeal as a permanent piece of machinery.

[illegible]tal, but possibly important, element of cost connected [illegible]d purchasing arises from the tendency of most govern[illegible]te private traders by permitting very generous margins at all stages of the distributive process. I speak without having seen any systematic study of the matter, but I suspect that the margins in the British food industry are from 50 to 100 per cent higher than what would be regarded as "just" in the United States and higher than those prevailing in British import-distributing industries that do their own buying abroad.

---

[4] [illegible]on) [illegible] pp. 801-803.

In the field of industrial raw materials, the chief complaint against centralized purchasing is that it tends to result in British manufacturers paying less than their overseas competitors during periods of world price increases and more during periods of world price declines. This has certainly been the case in recent years for cotton, tin, copper, and zinc. If the state trading department fixes its prices at long intervals, it must seek to recoup during periods of falling world prices what it loses during periods of rising world prices. If it does not fix its prices for long periods but follows some world market on a daily basis, it is difficult to see what becomes of the supposed advantages of centralized purchase in giving manufacturers price "stability." From this point of view, it seems that one can support the *Economist's* verdict that at best centralized buying will do no better than private trade while it is very likely to saddle the country's fabricating industries with price lags that place them in a very uncomfortable position during periods of falling world prices. Are we to suppose that advocates of state trading are keeping up their sleeves an unstated assumption that we are in for perpetual world inflation? This, at least, would be a defensible case.

It is impossible here to go into all the arguments for and against long-term contracts. Most of them reduce to the proposition that if civil servants are terribly smart or terribly lucky, they will get the better of the suppliers, while if they are not, they will get stuck.

I have already commented on the effect of long-term sale contracts in introducing rigidities into the economy. The same is true of long-term purchase contracts viewed from the angle of the importer. There is a pronounced preference in the British civil service for long-ter[illegible] contracts for staple items, such as grain and meat. This is based, q[illegible] openly, on the belief that by tying suppliers' resources for [illegible] period to the British market their bargaining position is weak[illegible] future negotiations. The Polish bacon industry, for example, [illegible] the British to be developed almost exclusively to meet Br[illegible] The cost of altering types gives Britain a margin of adv[illegible] negotiation.

The trouble is that this theory is getting around. As [illegible] gentine-British meat war, suppliers are finding that Brit[illegible] for an assured supply at a known pric[illegible]ides a[illegible] the complaints of flagrant neglect of economy in investment are found. Although somewhat intangible benefits must be cited to justify subsidy expenditures—and wasteful and unnecessary subsidies are to be deplored—some subsidies appear essential to national security in those fields.

II

Both competitive highway and railway agencies are far removed from necessity of justifying present-day investment on noneconomic grounds. Both types of carriers rely on revenues to recover the expenses of operation and the cost of road maintenance. Although one owns its right of way and the other does not, in both cases capital outlays for road maintenance and construction derive wholly or principally from user payments. Capital formation largely results from gross savings by carriers and reinvestment, with government agencies substituted for private carriers in the case of highways. If demand for services rises, necessitating capital investment, revenues rise and the amounts available for reinvestment become more ample. Where political influences do not intervene, highway engineers adjust the amounts invested in specific highway projects to concrete measures of need and give priority to projects where estimated benefits equal or exceed the cost of the improvement. Those processes have weaknesses, but a strong point is the ultimate dependence of investment on evaluation by shippers and travelers of the service benefits received in substantial relation to the necessary costs and the benefits from alternative expenditures. This is the essence of allocation theory.

Since railroads are wholly cases of private enterprise, little difficulty is encountered in conceding that investments are limited by the prospects of positive market evaluation of benefits at least equal to the cost of the investment. In the highway field, however, it has not been customary to concede that investment is limited in like manner. First, highways are not private enterprises and thus are expected to be managed less carefully. Second, federal aid is granted to the more important systems and local roads are developed primarily for land access and community benefits. Third, services of arterial highways are not priced precisely as are railroad services, the rates for which comprise a single source of revenues to cover equipment operation and right-of-way costs. Taxes are levied to finance highways and service rates are charged to finance highway carriers, including their user contributions. That most tax revenues for primary highways are from user fees which resemble prices may not have been given enough attention.[6]

It may be questioned whether railroad pricing furthers an economic allocation of resources over highway pricing and taxing. The high ratio of variable costs to total highway carriers' costs indicates that service rates are priced in close conformity to costs.[7] This insures close weighing of service benefits against costs to the carriers as well as to their patrons. Shippers and travelers are competent to make those evaluations and to compare benefits and costs of highway services against those of alternative rail services. In the case of rail pricing, monopoly power, excess capacity, and equalization pressures have yielded service rates that often depart from unit costs. The theory of joint and common costs justifies that result as an economic pricing solution. On the other hand, is it superior to prices equated to traceable costs?[8] Shippers grossly discriminated against have not thought so. A whole area of administrative law and economics had to be developed to lessen injustices and improve the allocation from rail pricing.

---

[6] For a more detailed statement of highway pricing and criteria of investment, see James C. Nelson, "Investment Conditions in Highways," *Proceedings of the Pacific Coast Economic Association*, December 28-30, 1949, pp. 24-29.

It may be pointed out that the railroad right-of-way situation is basic to rail pricing practices. That ownership of road involves high fixed costs and a differential property tax burden is undeniable.[9] Highway carriers pay for their ways on a use basis, converting otherwise high fixed costs into variable costs. This advantage can only be approximated by public ownership of rail rights of way, with user charges comparable to highway user fees. The gains to motor carriers from joint use of highways cannot be extended to the railroads by public ownership of road facilities. Moreover, railroads could not render all service benefits of highway carriers.

III

A troublesome point is that highway carriers competitive with railroads may avoid some of society's costs of producing highway services. On the whole and on a national basis, motor vehicle owners have been found to pay aggregate highway costs for which they are responsible.[10] In some states, they probably pay too much as a result of political apportionment of highway user tax revenues for local roads of primary interests to landowners and communities. In others, they may not pay enough. Since competent factual studies have not been made in most states of the proper charges to be assessed highway users as compared with landowners and the general public for the multiple benefits of highways, roads, and streets, no exact conclusion can be reached in many areas.

---

[7] See Ford K. Edwards, "Cost Analysis in Transportation," *American Economic Review*, May, 1947, pp. 441-461.

[8] M. R. Bonavia, *The Economics of Transport* (Pitman Publishing Corp., 1947), pp. 89-93, 99-100, 103-111, 128-157.

[9] Ford K. Edwards, *op. cit.*, p. 453.

[10] *Public Aids to Transportation*, a report of the Federal Co-ordinator of Transportation, 1940, Vol. I, p. 26; and *Public Aids to Domestic Transportation*, a report of the Board of Investigation and Research, H. Doc. No. 159, 79th Cong., 1st sess., 1945, pp. 59-61.

Nevertheless, a weakness in the highway trucking and bus situations from the allocation viewpoint is the lack of persuasive evidence that the larger vehicles and combination units do pay the entire costs of the highway services chargeable to them. The charge of insufficient user payments—a longstanding issue between the railroads and trucks—has become a growing contention between automobile and light truck owners and the private and for-hire carriers using the heavier buses and trucks. There is growing evidence that over-all adequacy of highway user payments has been achieved by a system of differential pricing of highway services which discriminates against the automobile and light truck owners as a class and gives preference to the owners of heavy motor vehicles. In Washington, user tax discrimination appears to exist against most gasoline-propelled trucks, with the Diesel-powered trucks and buses and the trailers enjoying preferential treatment.[11]

The lack of conclusive evidence that bus and truck services competitive with railroads pay all economic costs of highway services should not lead to a hasty conclusion that uneconomic diversion to highways has placed the railroads in their plight. From the existence of some subsidy, it does not follow that its removal would save the railroads from a declining role. First, the automobile accounts for the most significant diversion of passenger traffic from the railroad. Such evidence as exists suggests that automobile owners tend to pay too much rather than too little of assignable highway user costs. However, even if they were to pay more, the service benefits of the automobile are so outstanding that it is doubtful that somewhat higher costs of operation from greater user payments would substantially reduce substitution. Second, studies of costs of bus and truck operators reveal that highway user contributions comprise a relatively small part of total operating expenses—in Washington about 5.0 per cent on the average.[12] Hence increases in user fees have small effect on total operating expenses and, to an extent, they may be offset by lower vehicle operating costs from improved highways. Third, truck traffic continues to grow both absolutely and relatively with an average revenue per ton-mile of 5.3 cents compared to 1.3 cents for rail freight. Although the latter is weighted by bulk traffic having low unit costs, it is still in point to cite the service advantages of trucks which divert other traffic at rates equal to or higher than rail rates.[18]

---

[11] *Ibid.*, pp. 26-30 and pp. 61-62, respectively. For information in a recent state study, see James C. Nelson, *Taxing Washington's Motor Vehicles Equitably for Highway Services*, a report submitted to the Joint Fact-Finding Committee on Highways, Streets and Bridges, State of Washington, September 23, 1950.

[12] *Ibid.*, pp. 138-141, 148-151. Class I intercity motor carriers of freight in 1947 paid motor fuels and oil taxes (including federal excise taxes) and vehicle license and registration fees in an amount equivalent to 3.7 per cent of their total operating revenues. *Study of Domestic Land and Water Transportation, Hearings* before the Subcommittee on Domestic Land and Water Transportation of the Senate Committee on Interstate and Foreign Commerce, S.Res. 50, 1950, pp. 178-179.

Imponderables in evaluation of highway subsidies are traceable to defects of cost finding. Highway engineers have constructed wonderfully efficient and convenient highway facilities, but they generally do not know how much of the construction and maintenance costs are caused by each class of motor vehicles. Highway cost accounting is in its infancy and engineering opinion is highly uncertain and sometimes conflicting as to the capital and maintenance requirements of the heavier vehicles. Thus a striking deficiency exists in highway cost studies to trace separable portions of aggregate costs for assignment to the vehicles occasioning them. Hence findings on whether the larger and heavier motor vehicles pay adequately for highway services have become exceedingly controversial. Even were incremental cost findings available in all states, it would still be necessary to apportion common costs—the largest share of aggregate highway costs—over all classes of vehicles by assumption instead of on cost factors.

Lack of cost data and the necessity of capital formation have required apportionment of highway expenditures chargeable to highway users on some measure of relative use—usually the gross ton-mile. This workable procedure has brought vigorous criticism from truckers and some highway officials. One criticism leveled is that the procedure weights weight-function costs too much and this penalizes efficiency in use of highway equipment. Another is that it neglects differences in the value of services rendered by highway carriers; i.e., passenger carriers should pay higher highway charges per gross ton-mile because they or their patrons can be made to pay them while trucks will lose some traffic to railroads if charged a full gross ton-mile highway charge. The former criticism may be true, but weight-function costs cannot be denied and differential cost findings for each state are not available to prove or disprove the truckers' point. Until they become available, use of gross ton-mile apportionments, with modifications for overweighting of the weight factor, will adjust highway user fees in approximate relation to probable cost of highway services and thus will improve the allocation of resources. On the other hand, considering ability to pay as justification for low charges for large trucks may be questioned when highway capacity is short and differential requirements are imposed by the ever rising volume of traffic of combination units. Rather, the willingness and capacity of those classes of vehicles whose demands require differential investment and maintenance to pay the full costs of the added requirements should be explored before the investments are made.

---

[18] For two recent cases, see *Traffic World*, November 11, 1950, pp. 17-18, 39-41.

Another weakness of the allocation achieved through pricing of highway services is the increasing amount of federal aid. Federal aid payments are from general sources of Treasury revenues, not specifically from highway user fees. Federal aid is granted to achieve national objectives: maximum interstate commerce, post roads, and national defense. To the extent that extra facilities are required to accommodate heavy military equipment, a charge to the military account for the additional investment and another for use are reasonable. If, however, the geometric and structural designs of interstate highways are no different than they would have been without the heavy military traffic, then federal vehicles should pay for public highway services as other vehicles. Aid for national defense should be closely limited to requirements to avoid subsidy from general taxpayers to highway users.

Truckers have argued that they should not pay fully for the added investment required for greater ballast and other strengths necessary in modern highways because the expenditure is required by the heavy-axle loads of military trucks. It may be that bridges and structural features have been strengthened by highway authorities in anticipation of heavy military use. To the extent, however, that commercial vehicles take advantage of those facilities by general overloading and under relaxed size and weight restrictions, a flow of benefits is received which warrants reasonable charges for the highway services making those benefits possible. Only if added highway costs for military vehicles are for facilities which have no value to commercial vehicles should commercial vehicles be exempted from paying a pro rata share of the costs.

Offsetting these weakness of highway pricing in terms of an economic allocation is some evidence that trucks and buses competitive with railroads may be overcharged for local roads and streets. Although those vehicles make some use of such facilities and in some cases have damaged bridges and roads not designed for heavy vehicles, the direct benefits of local roads flow primarily to landowners and the indirect benefits may be equally available to the railroads. To a marked extent, user revenues have been substituted for property and other general taxes for support of local facilities. User fees are thus either higher than they would have to be if the revenues were invested where the traffic demand justified or the highway facilities bearing the greatest traffic load have been underdeveloped. Either result makes total highway carrier operating costs artificially high to a degree. Unless user tax apportionments for local roads in excess of user earnings on those roads can be considered equivalent to payments of property taxes on highways, they would serve to handicap truck competition with railroads in much the same way that rail competition with highway carriers may be handicapped if the latter are not charged with the full annual costs of their differential highway requirements. What the net situation is today is an unknown. It is possible that both railroads and truckers have cause to complain.

IV

This analysis has suggested that the relations between highway and rail carriers, so far as investment functions are concerned, are not basically such as necessarily to prevent an economic allocation of resouces as between those two fields. As the principle of user payments for highway services has been universally applied, it is likely that the long-term basic trends in the division of traffic are fairly tenable. This does not mean that carrier and public policies cannot be improved or that a somewhat better allocation of resources cannot be achieved. It does imply, however, that highway development need not be restricted to projects where diversion of traffic from the railroads will not occur. Investment has not been limited that way in the past and no sound economic reason exists for revising the policy. It is sufficient whether the specific highway project promises dependable gains equal to costs or whether it will be self-liquidating from properly adjusted highway user payments. Highway engineers have long applied those tests on special toll projects. Increasingly, they are applying them to state highway projects—the facilities by far the most competitive with railroads.[14] Recognition of this does not imply criticism of the Hoover Commission reorganizations in federal transport administration, one objective of which was greater co-ordination in public expenditure. Co-ordination should not mean suppression of economically justifiable projects.

Especially on the state level, effort should be made to find the highway construction and maintenance costs that are traceable to motor vehicles which divert traffic from railroads or command the newly created traffic. Those costs and a reasonable share of all common costs should be allocated to those vehicles. Test road and design studies should be expanded by federal and state authorities to obtain the engineering facts essential to cost finding. State legislatures should adjust user charges for different motor vehicles on evidence of financial responsibility as found in objective studies. Efforts should be made to charge the costs of specific military requirements for highways so as to avoid subsidies to commercial vehicles. Accomplishments under such a long-term program would provide a more economical allocation in the future, but it would bring no immediate and probably little ultimate relief to the railroads from the relentless pressure of the law of substitution.

---

[14] Shorey Peterson, "The Highway From the Point of View of the Economist," in *Highways in Our National Life*, edited by Jean Labatut and Wheaton J. Lane (Princeton University Press, 1950), pp. 194-199.

Should more direct measures be taken in a peacetime economy to retard substitution of highway carriage for rail transport? Those would involve establishing regulatory limits on the length of truck haul; discouraging enlargement of route authority by purchase, merger, or new applications; requiring truckers to charge artificially high rates for long-distance shipments; or, as in time of war, curtailing the motor fuels, tires, repair parts, and new vehicles for truckers competitive with the railroads. In this paper those alternatives could not be analyzed at length. However, their mere mention suggests a type of control upon the freedom of travelers and shippers to choose transport services that would be highly alien to the principles of economic democracy. In addition, the demand for speed in transport would be overlooked. And unless wholly arbitrary actions of direct limitation were applied, far more refined cost finding than is now available in transport would be required. Action restricting trucks from long-distance traffic spheres to protect railroad revenues and the existing allocation of the rail revenue burden between high-value traffic and low-grade agricultural and extractive traffic should be premised upon explicit criteria of need and responsibility for railroad facilities and the desirability of maintaining the present location of industry and agriculture. Is the future of private railroads under enlightened managerial and regulatory policies really so dismal in the United States as to require direct controls of this sort?

AN EVALUATION OF PUBLIC POLICY TOWARD THE RAILWAY INDUSTRY

By Ernest W. Williams, Jr.
Columbia University

The railroad industry appears to be one which, from its earliest years, has been habitually precarious. Neither before nor since the advent of federal regulation has its financial success been inspiring. At various periods throughout its history the application of developing technology has been stultified by financial stringency. Difficulty has been experienced, even, in providing the capacity which the market demanded. The period since the late war began with promise, but adverse developments followed closely. At the moment, traffic is heavy and well sustained; earnings are at fairly high levels. But, as always, a period of temporary relief seems likely to be followed by a new crisis produced by rising supply costs and demands for wage increases and further adverse adjustment of the working rules. If traffic continues heavy, adjustment will be less difficult than at some periods in the past, but there is little of promise in the long-run outlook. Fortunately much of the limited opportunity of the troublesome postwar years has been exploited. The roads have gone through a revolution in motive power and much progress has been made in the improvement of the fixed plant and rolling stock as well. Hence these are elements of strength. Yet the industry has proved unable to supply either the quantities or standards of service demanded and for this, among other reasons, has been losing steadily in its proportionate share of the total transport market. Expansion of other types of transport continues at a rapid, possibly at an accelerating, pace, and these gains are made largely at the expense of the railroads.

The entire recent history of the industry presents a paradox. Except for brief periods, freight traffic has taxed the capacity of the roads since before the entry of the United States into World War II. The late summer of 1950 was characterized by more severe shortages of freight equipment than at any time during the war. Yet earning power has been erratic and inadequate and the evaluation of the securities markets has been more pessimistic, even, than the modest earnings would justify. Marked uncertainty with respect to government policy is generally agreed to be a factor which bears much responsibility for the reactions of the investing public. The unfavorable trend of labor relations is surely another factor, as is the impact of specialized competition.

In good part the apparent paradox finds explanation in the heavy losses sustained in performing certain portions of the rail service. The general unprofitability of the passenger service is well known. Sufficient emphasis is not always given, however, to the contribution of head-end business, i.e., mail, express, and baggage, to the staggering passenger deficits as computed under the method prescribed by the ICC. Neither is sufficient emphasis given to the extent to which commutation, local, and branch-line service is responsible for these deficits. For, notwithstanding the profitability of numerous long-distance trains, few railroads have covered the assigned costs of the passenger service since the precipitous decline in load factors which followed closely the end of the war. The less-than-carload freight service is responsible, also, for losses which must be covered by other segments of traffic. The causes of these losses are well known, yet little attention is focused upon them except by the individual carriers which, by their separate efforts, are not likely to find more than a partial solution. The dispersion of the merchandise traffic over many competing services has diluted the railroad volume so materially as to render economical service impossible. Even the reduced rail volume is, moreover, so greatly dispersed over a multitude of routes as to retard progress in the effective adjustment of operations to the available volume. Alone among the major categories of rail freight traffic, L.C.L. tonnage has fallen well below the level of the late depression years and stood in 1949 at only half the level of the first postwar year. Meanwhile forwarder business tendered to the rails for movement has fallen off considerably from the postwar peak, although it stands well above the prewar level. Both the passenger and less-than-carload deficits indicate the performance by rail of a substantial local and small-lot service for which the railroads are not well suited and for which they cannot compete at remunerative rates with more flexible and adaptable types of transport. Altogether too large a proportion of rail plant and equipment is devoted to such service and the labor costs are out of all proportion to the service produced. In 1949 L.C.L. freight accounted for only 1 per cent of originated tonnage and a bit over 5 per cent of gross revenues; yet it occasioned 12½ per cent of the car loadings. Since, unlike carload freight, most of it is loaded, unloaded, and transferred at the expense of the railroad and is, in addition, given pick-up and delivery service, the disparities are obvious.

Although the carload freight service has absorbed the deficits of other services and contributed in addition the net income of the carriers, the trends in this service are not entirely healthy. By 1949, tonnage, originated in the manufactures and miscellaneous category, to which the rate structure assigns a large proportion of the transportation burden, had fallen below the level of 1941. Products of agriculture—generally low-rated items which make little contribution to burden—stood 40 per cent above 1941. Animal products and forest products, both of which embrace a large proportion of low-rated traffic, showed slight declines. The 1949 figures for products of mines reveal little, largely because of strike conditions. But the tendency has been generally upward during the entire period since 1938. The composition of the carload traffic has therefore been undergoing changes which are unfavorable to unit revenue.[1]

During the period of pronounced pessimism beginning late in 1948 and continuing through the early months of this year, the railroad industry intensified its habitual fixation of blame for all that is adverse in the industry upon the defects and failures of public policy. It engaged in oversimplification. Thus the outcry against subsidy to other means of transport was particularly violent. Meanwhile the carriers, in the face of declining traffic, appeared to find little that they could adapt into a positive policy of their own and did not seem to recognize faults which are plainly apparent to others. Rate cutting to meet particular competition worked up toward a furious pace. But it went beyond selectivity and assumed the appearance to some extent of going beyond reason. The resurgence of traffic volume and the expectation of another general rate increase will, no doubt, produce considerable moderation. A new level must be established from which the pattern of rate cutting may be resumed. Meanwhile, over the last year, railroads have been reduced too often to the role of mendicants in their relationships with shippers, seeking to sell, not on the basis of their ability better to meet the shippers' needs than others, but on the grounds that shippers should ignore short-run advantages and make sacrifices in the interest of the long-run maintenance of rail service. Needless to say, such an appeal is not often successful in securing competitive traffic.

In the light of this attitude we may well inquire how far public policy is responsible for weakness in the railroad industry and what correctives are needed to restore more permanent health to the industry under private ownership. Like the post-World War I and depression periods, this is one in which a plethora of discussion occurs and numerous suggestions are offered. From the railroad side they are of limited objective and encounter the violent opposition of other types of transport likely to be adversely affected. Virtually a competitive campaign of publicity has been under way in which distortion is common and has a tendency to grow. Other students, who attempt to approach the problem from the point of view of the national interest, take a broader view looking toward the development of an integrated national transport policy. It is generally apparent to them that, while a reformed public policy can do much to assist a healthy development of the several types of transport in appropriate relationships to one another, such a public policy cannot, alone, cure all of the ills which beset the railroad industry today. Unless the better climate produced brought forth sufficient initiative on the part of the carriers themselves, the position of the industry would remain unsatisfactory.

---

[1] For comparative contributions of various commodities to burden see Delbert M. Steiner, "The Demand for Transportation by Commodities," 18 I.C.C. *Practitioner's Journal* (1950).

We have today a variety of means of transportation having differing capabilities and economic characteristics. This affords previously unsuspected opportunities for enhancing the efficiency of transport in its role as a part of the productive process. The economist's objective in the approach to transport policy is to hold to standards which seek efficient, integrated operation of the facilities to produce services demanded by the market at prices which accurately reflect the costs involved, including those of appropriate development toward future needs and of an optimum application of technical improvements. An appropriate allocation of resources between transportation and other functions in the economy and between the several forms of transport cannot otherwise be achieved. Hence the closer the approach to these objectives the more the assurance of a healthy development of the industry as a part of the national economy.

In the face of sharp differences in the economic characteristics of the several methods of transportation and the imperfections of the competition among them, achievement of this objective suggests the necessity for departure from competitive tests toward a high degree of economic planning accompanied by effective methods of implementation. There are, however, serious objections to an approach of this type which would be more readily applicable to static and certain conditions than to highly dynamic ones.

With the rapid development of technology in the several types of transportation, there appear to be no sharply defined areas within which the individual types have manifest economic advantages. There is displayed, instead, considerable variety in the apparent patterns of cost, and both the economic characteristics and the capabilities of the several forms are changing over time. Public policy must in consequence provide for flexibility in the accommodation of the means of transportation to the needs of the market. It must provide ample room for experiment and for the development of each form. Except in this way the capabilities of each form will not have appropriate opportunity to demonstrate itself and the improvements which may become technically possible might be stultified by unduly rigid preconceptions. In such an atmosphere the railroad should, of course, have large freedom to develop and demonstrate its own superiority in whatever areas and for whatever traffic this proves possible. Accordingly, it must be relieved of undue restriction and artificial obstacles imposed by public policy and of excuses behind which a lack of initiative can be concealed.

The objective of developing over time, through an essentially experimental process, a transportation system in which the several means of transport come to play those parts for which they are best fitted, suggests the paramount importance of developing a neutrality in the attitudes and policies of government with respect to all types. All are now sufficiently mature technically to proceed to stand on their own without government assistance.

In its evaluation of the defects of public policy, the Brookings report characterized the state of current government activity as follows:

> Expenditures for the provision of transportation facilities are authorized with no consideration for over-all transportation requirements or the relationships among transport agencies. The result has been an improvident use of public funds and a failure to program in accordance with priority of need. The use of general taxes rather than user charges to finance these facilities has resulted in an uneconomic distribution of traffic and consequently a misapplication of productive resources. In addition, failure to consider the problems and possibilities of the railroad system in conjunction with the planning of public transportation facilities has prevented the realization of maximum benefits and maximum economy.
>
> It has been noted, too, that Congress has not succeeded in welding the various phases of regulatory and promotional programs into an economically sound and efficiently administered transportation policy. It has set as one regulatory goal the fair and impartial treatment of transportation enterprises and has imposed on them the obligation to provide service without discrimination or preference between individuals and communities. At the same time, it has been deliberately discriminatory in the varying degree of public aid extended to the several transport agencies. It has charged two separate regulatory agencies with responsibility for preventing wasteful and destructive competitive practices in transportation, by rate regulation and by controlling entry and abandonment of business operations. At the same time, it has given other branches of government the power to determine independently the character of physical transport facilities, their location and capacity, and the rates at which they shall be expanded.[2]

I am in full agreement with the result of the Brookings study that wherever it is appropriate as a method for the government to provide certain basic transportation facilities, the carriers using those facilities should bear an appropriate user charge designed to reimburse the government expenditure with interest. This implies the advent of user charges to cover federal aid highway expenditures, federal aid airport expenditures, and the expenditures of the government for the installation, maintenance, and operation of aids to air navigation. It implies the elimination of the subsidy element in air-mail payments. It implies also the imposition of tolls upon the improved waterways designed as far as possible to amortize the sunk costs and cover all maintenance and operating costs of these facilities. New waterways projects should be subjected to the test of ability to sustain themselves through such charges. A prerequisite is, no doubt, a new study by a respected and impartial body similar to the public aid study of the Federal Coordinator of Transportation.

---

[2] Charles L. Dearing and Wilfred Owen, *National Transportation Policy* (1949), pp. 351-352.

I must confess that, unfortunately, there appears to be little likelihood in our political atmosphere that any of these devices will develop quickly except possibly some adjustments in the highway tax structure at the state level. In consequence, although a policy of this type may be recommended, the central principle upon which it is based is unlikely to be adopted in the foreseeable future by the government bodies concerned. All that can be hoped for is a gradual movement in the direction of greater neutrality in government policy. Some minor steps are, indeed, in contemplation. The alternative method of providing compensating subsidy for the railroad industry seems equally unlikely of adoption. Yet the continuance of discriminatory public aid, through the reflection of such aid in the cost structures of competing forms of transport, necessarily produces a skewed allocation of resources among the types of transport and an excessive allocation of the total national outlay to transportation as a function.

Fortunately the importance of establishing neutrality in government aids, while large, is not as great in the short run as the railroad industry would have us believe when considered in relation to the more limited question of the survival of the railroad industry in private ownership. Even if the figures published by the railroad industry itself are accepted, analysis would probably show that the complete elimination of public aid to other types of transportation would not alone and in the near future mitigate the problems of the railroads materially. Nevertheless, movement in the direction of such a policy is desirable both for the assistance it would lend and because it would clear the air and force the railroads to focus upon their own problems and the means for resolving them. Incidentally, and of large importance, it would pave the way for significant economy in government expenditure and for the more productive use of funds appropriated at lower levels.

The plight of the railroads today is the result of developments which public policy should not and, I hope, will not nullify insofar as they afford real advantage to the consumers of transportation service. The technical capabilities of the newer forms of transportation should not be legislated out of existence. Indeed, they should have the fullest opportunity for exploitation on an equal basis with the railroads. The railroad industry itself must learn to live within conditions encountered and develop a resourcefulness in adapting itself to the new set of problems which the advent of competitive transportation has fostered. A good deal has been done within the railroad industry with this objective in mind but the response of the industry has been spotty and only in part well thought out. Simple rate undercutting has too often been resorted to when what was required was an integrated program of which service improvement and the development of operating economy should have been an inherent part. The obstacles are not insuperable, as indicated by the success achieved by certain carriers with respect to portions of their business.

Under present conditions, however, both the railroads and common carriers by motor vehicle suffer under certain disabilities which arise from regulatory and tax policies. The impact upon the railroads is, however, considerably more serious, since the industry lacks the flexibility and the freedom from broad responsibility to the shipping community which tend to characterize motor common carriage. Both the Brookings study and the report of the Secretary of Commerce[3] emphasized the need for developing greater uniformity in regulatory treatment. The former recommended certain relaxations in rate regulation with a view to fix once again both authority and responsibility upon the carriers and to restore the ability to accommodate the rate structure quickly to economic changes. This recommendation concerned, particularly, the relief of the Commission from responsibility in connection with general rate level changes. Certain aspects of the regulatory problem were, however, scarcely touched upon by either of these studies.

Even under present legislation, regulatory policy as evolved by the Interstate Commerce Commission in the exercise of its large discretion could veer far toward either of two poles. It might become almost a regulation designed to implement a plan for the allocation of traffic among the several forms concerned in the light of some assumptions as to relative fitness. It might, at the other extreme, become an entirely negative regulation which would seek only to deal with complaints and to put a floor under the more disastrous competitive activities of the carriers. What we have appears to be a somewhat fuzzy attempt to establish an intermediate position, although one which is closer to the second than to the first pole. The result is a costly, frustrating, and time-consuming effort which is only partially effective in shaping the course of events and not always in an easily discernible direction. All parties complain of the delay and expense involved in Commission proceedings; yet each, when it suits his purpose, pursues the tactics of delay to perfection. Not a few proceedings seem to promise little for the opposing groups save what may be gained from the *status quo* during the course of the dispute.

---

[3] *Issues Involved in a Unified and Co-ordinated Federal Program for Transportation* (December 1, 1949).

The old standards of regulation which were developed during the era when the railroad industry had a near monopoly of internal intercity transport have been seriously impaired during the attempt to apply them in a highly competitive era. New standards which are better attuned to present facts have scarcely begun to be developed. Certain inevitable tendencies have been recognized—notably the tendency to move toward cost as a primary standard of rate making; yet little has been done except for the purpose of somewhat softening the transition. Even the tools which would be necessary to the appraisal of rate structures based more nearly upon costs have been slow in their evolution and their utility has been a subject of substantial argument in many quarters. Meanwhile regulatory policy has pretty largely been adrift. In the prewar period it was characterized for the most part by a willingness to sanction equality of rates, tempered in the case of water carriers by a tolerance of differences which were believed sufficient to compensate manifest service disabilities. Since the war the equality between rail and motor common carrier rates has been significantly disturbed, although efforts are under way for its restoration. The Commission has shown no disposition, even where railroads were manifestly more economic for the traffic in question, to approve rates which would force their motor carrier competitors out of business. Its rather negative policy has contributed to an undue dispersion of the business with the accompanying sacrifice of economy.

The impact of competitors upon the railroads has been spotty. No competitor has the ability or the obligation to compete universally as would one railroad with another at common points. The motor carrier of freight generally confines itself to traffic which is able to pay some four times the average of rail revenue and, even within this category of traffic, exercises some choice over both the commodities it will carry and the points it will serve. The inland water carrier, limited in the area of its competition by physical factors, confines itself largely to a limited range of bulk commodities in large lots. The airline competes only for the high-grade passenger, mail, and express traffic over fairly long distances and between major points. Naturally enough it makes no bid for the short-distance local traffic which railroads are compelled to accommodate at a loss, nor does it seek to serve points where the traffic potential is regarded as inadequate except when heavy subsidy is offered. Even the motorbus often successfully avoids the unprofitable commuter traffic and caters only to the more lucrative off-peak traffic. Thus the railroad, with its universal obligation to carry, is beset by a wide variety of specialists which, together, confront it over a considerable range of the business.

The nature of specialized competition to which the railroad has been subjected has resulted primarily in the breaking down of the rate structure upon the higher-rated traffic, although upon a selective basis as to lengths of haul and territorial areas. The result has been to force unusual portions of the transportation burden upon the lower-grade commodities and upon the longer hauls. This is a development viewed with alarm in many quarters and with considerable reason, since it tends to diminish the opportunities for the movement of low-grade commodities and to restrict the length of haul for a wide range of traffic. Since the economy has been adjusted to a value of service rate structure which put considerable emphasis on fostering traffic of this type in order to meet the necessity of the railroad industry for a heavy volume of traffic, the transition toward a structure based more nearly upon cost factors is likely to upset many established commercial relationships. However, the characteristics of the railroad industry, which remains the principal agency for the transportation of freight, compel a rate structure designed to preserve the volume of traffic. Value of service, therefore, cannot be left out of account in the adjustment of the rate structure. If it is to continue to be a rate-making factor of importance for the railroad industry, however, then it must be applied in like fashion to the rates of all forms of transportation under regulation. The Commission has made some effort to do this, and on the whole the impact upon the value of service structure has come more from carriers outside the Commission's control than from the carriers which it regulates.

Where the competition which faces the railroads is either private or exempt carriage, it has complete freedom to pick and choose the type of traffic and the points between which such traffic will be handled. Characteristically private transportation is arranged only where a regular and somewhat balanced flow of traffic is available. The irregular movements including those to points where volume is light and those to points where a back haul is unavailable are commonly left to the common carriers. The same is true of periodic and seasonal peaks of traffic. To the extent this occurs, common carriers are deprived of a portion of the base traffic upon which they must rely for net income and are left the irregular and undesirable traffic which the specialized service cannot accommodate with economy. The growth of specialized service, therefore, continually impairs the integrity of common carrier service.

Changes in public policy are clearly indicated by this state of affairs. It does not appear to me that a solution is to be obtained primarily by the extension of regulation into the exempt areas, although some of this is indicated. The exemption of motor carriers engaged in the haul of agricultural products, for example, has proved to be much broader than was intended by the Congress at the time the Motor Carrier Act was passed. The more effective solution, however, would probably be a substantial revision of regulatory policy as it applies to the making of rates designed to compete with specialized private and exempt carriers and with specialized contract carriers offering limited services. Greater latitude is already permitted to common carriers in meeting such competition under the policies of the Interstate Commerce Commission. But the present policies of the Commission do not appear to go far enough. Since private and exempt carriers by their nature can pick and choose the traffic which they will handle, common carriers must be allowed equal leeway in the sense that they will be permitted to make rates for the traffic in question without the sacrifice of revenue unnecessarily upon those portions of the business for which specialized carriage is improbable. Volume and agreed rates are necessary even though they involve a contractual relationship with particular shippers. Since any shipper whose traffic is so constituted as to permit the use of motor, water, or pipe-line service either in private or contract relationships can secure the benefit of charges tailored to such specialized services for his base business, it would be in the interest of the preservation of adequate common carrier service to permit common carriers to accept traffic of this sort on the basis of rates open only to shippers so circumstanced. The adoption of such a policy would remove much of the difficulty which has surrounded the attempt to make multiple-car and train-load rates as well as all-commodity rates and would tend to preserve much desirable traffic for the common carrier services.

It is entirely possible that the definition of private carriage which the Commission has been forging through a line of cases terminating in the recent Lenoir and Schenley cases is too broad. However that may be, I do not recommend a policy for the undue restriction of private carriage but rather a policy which enables the common carrier to meet such competition on all fours. It seems apparent, however, that considerable adjustment of the tax structure in many of the states is called for to minimize the distinction between private and common carriage. The type of private carriage which impinges upon the railroad industry represents just as surely a commercial use of the highways as does the conduct of a common carrier service over them. If anything, it would appear that the burdens placed upon the common carriers should be less than those placed upon the private carriers in as much as the common carrier has long been viewed as clothed with a broad public interest whereas specialized private transportation serves only the industry directly concerned.

Even in its competition with common carriers by water and motor the railroad encounters a degree of specialization on the part of such carriers. Many motor common carriers confine their operations to principal points where there is an assured volume of desirable tonnage. They accept no obligation to serve intermediate points and in many instances have no operating rights at such intermediate points. Moreover, by limited commodity authority or by the ease with which they can turn away undesirable traffic, they are able to accomplish a good deal in selecting the commodities which they will handle even between restricted points of service. The simultaneous existence of such so-called "common carriers" alongside of common carriers of general commodities which offer service at intermediate as well as terminal points has always been a factor tending to disorganize the motor carrier rate structure. It appears that a basis of equal competition could be achieved only by placing upon all motor common carriers the obligation to handle general commodities within the ability of their vehicles and to serve all intermediate points upon their lines where there may be a demand for motor service. This would require considerable revision of existing common carrier certificates and a reinterpretation of the obligations of carriers which hold themselves out to the general public. The difficulties of enforcement of such a policy are obvious.

Still in the regulatory area, it has become abundantly clear that the rail carriers must be afforded fuller freedom to abandon unprofitable services and lines. The attitude of many state regulatory bodies has been unduly restrictive and has resulted in the continuation of large losses which are unavoidable except by abandonment of service no longer needed because the traffic has deserted the rails. This is particularly true of passenger service abandonments in many of the states. Similarly the policy of the Commission, although less restrictive than that of many state bodies, has not been as liberal as the conditions demand. Railroads should be permitted, where it is shown to be in the public interest, the right to provide substituted highway service and should develop methods for the physical co-ordination of that service with their main line services in order to reduce the cost of break of bulk. In many instances, however, the traffic has so far deserted the railroads for the highways as to suggest that the responsibility for offering a complete common carrier service at reasonable rates should be placed upon the motor carriers.

Above all, the regulatory Commission in exercising its jurisdiction should undertake as far as possible to avoid undue dispersion of the traffic among a number of different types of service and a multitude of carriers. In clear cases the Commission should be prepared to cut out a form of transportation which is uneconomical by comparison with the rail service by fixing appropriate minimum rates. Its policy in the past has avoided this type of action with the result that, even where it is manifestly more economical for the traffic to move by rail, it has continued to be dispersed among several types of transportation. The result is a lack of economy in the performance of the transportation service as well as higher rates to the shipper than the circumstances may justify. In the same way the rail carriers should not be inhibited from increasing the rates upon unprofitable short haul and less-than-carload traffic where inroads have been made by other forms of transportation to such a degree as to make it impossible to operate good service at competitive cost levels. Railroads should be permitted to retire from the traffic if they find this a desirable policy and the burden of providing a complete service should be fixed upon those carriers now handling the bulk of the business.

The long-run strengthening of the railroad system will call for the assumption by government of greater responsibility for leadership than it now accepts. Although I am not prepared, at present, to advocate a policy of compulsory consolidation into a fixed pattern of regional systems for many reasons which it is impossible to discuss here, I am inclined to suggest that the intermediate position taken in the Brookings study has substantial merit. The force of government should be available to put in effect, without undue cost or undue legal complications, consolidations which the carriers are desirous of undertaking and which would appear to serve the public interest. It should be made clear that from the point of view of public policy what is desirable is the type of consolidation which holds the prospect of economy through the elimination of duplicate lines and services and through the concentration of traffic over the better located lines of railroad on which the funds available to the carriers can be concentrated for the purpose of making them fully modern transport facilities. The policy should give special emphasis to programs for the unification and improvement of terminal facilities in the major urban centers where a very large proportion of the obsolescence and waste in existing operations is concentrated. Although it is true that much could be accomplished short of consolidation, the railroads have shown little initiative in co-operative endeavors and tend to consider consolidation as a prerequisite to the type of step which is necessary in the achievement of greater economy and higher standards of service.

Finally, some attention must be focused upon the peculiarly difficult problem of labor relations in the railroad industry and upon the ineffective public policy which now exists. The railroads are severely handicapped in their attempts to render the type of service demanded in the present competitive era by the excessively complicated working rules which have developed in the industry over the years. This problem has become much more serious under the interpretations of the National Railroad Adjustment Board and their widespread application throughout the railroad system. It occasions not merely the payment for considerable service not obtained from employees and the payment for service at excessive rates but also forces inefficient use of equipment and facilities in many instances. The established procedures have proved cumbersome and slow moving. They have proved to be open to appeal on the side of labor but not on the part of management. They have been conducted, in effect, behind closed doors without coming to the attention of the public except as strike issues have arisen. Public attention must be focused upon the shortcomings of these procedures and upon the burden which is placed upon the service of common carriers by the existing features of the working rules. Means must be found for restoring direct negotiations at appropriately high levels between carrier managements and the brotherhoods. A policy of increased rates of pay in return for the elimination of hampering and restrictive rules must be tried. Without some solution of this continually deteriorating situation, the permanent long-run health of the railroad industry cannot be assured. Needless to say, it has also become apparent that ways must be found to overcome the breakdown of the Railway Labor Act in the matter of periodic negotiations. Unless emergency boards can be returned to their intended status and interruptions and seizures avoided, it would appear that the entire structure of the Act must be revised.

SUBSIDIES AND COMPETITION AS FACTORS IN AIR TRANSPORT POLICY

By STANLEY BERGE
Northwestern University

In April, 1949, the Senate Committee on Interstate and Foreign Commerce began to hold a series of hearings for the purpose of investigating the financial stability and operational efficiency of the air-line industry. These hearings continued through June, 1949, and were resumed again for two days in January, 1950. Subsequently, a document of some 2,500 pages has been published containing the testimony of eighty-six persons, in addition to considerable correspondence and miscellaneous data.

The purpose of the investigation, as revealed in the letter signed by Senator Edwin C. Johnson, Chairman of the Committee, inviting witnesses to appear was "to learn why, in a period of unprecedented prosperity, the air-line industry is in such poor financial condition." The letter further asked:

> Can it be explained by excessive competition? Is it poor management and loose, easy-going financial policies? Are there too many vice presidents with unlimited expense accounts and too elaborate downtown ticket offices? Is it the continuing impact of post-war reconversion and expansion? Has it resulted from administrative practices by the Civil Aeronautics Board or the Civil Aeronautics Administration? Is it due to policies laid down by Congress?[1]

These and other questions were asked.

Subsidy and Competition Are Major Issues. Review of the testimony collected during the airline industry investigation finds two major issues continually crowding other problems of public policy from the scene. The first is the question of subsidy: to what extent should commercial air transportation be promoted by means of public aids or subsidies? The second is the question of competition: to what extent should competition be restricted in commercial air transportation? At the risk of neglecting other important areas of public policy toward air commerce, it seems desirable because of their pre-eminence to limit this discussion to a brief consideration of these two areas of great controversy.

Inasmuch as freedom from government support and freedom from government control are often considered essential to the preservation of the American system of private enterprise, we may well consider the possible short-run and long-run effects of surrendering these freedoms to a considerable extent in our public policy toward commercial aviation. It has been said that the price of security is the loss of freedom. Thus there is a distinct relationship between government subsidy and government control, not only of competition but of many other things. He who accepts subsidy must accept government control.

---

[1] *Air-line Industry Investigation,* Hearings pursuant to S. Res. 50 before the Committee on Interstate and Foreign Commerce, United States Senate, 81st Cong., 1st and 2nd sess. (April 11, 1949-January 31, 1950), p. 2.

Competition may be restricted in transportation even without regard to the question of subsidy. Since 1920, railroad competition has been subject to government restrictions and the same has been true of motor carrier competition since 1935. These restrictions of free competition in transportation have been based on a fairly recent development in the philosophy of transportation regulation; namely, protection of the carrier from "excessive" or "destructive" competition. Because this is a far cry from the original public policy of encouraging carrier competition and restricting monopoly, it represents a highly controversial question. The question resolves itself to whether, like railroads, airlines shall be treated as public utilities and subjected to the full gamut of public utility controls, or whether they will serve the public better and achieve greater prosperity if treated as relatively free competitive enterprises performing a public service.

In the remainder of this paper, I shall first discuss the problem of subsidies to air transportation and then the problem of regulating competition.

Nature and Extent of Air Transport Subsidies. What is subsidy? What is public aid? Are these two things equivalent? While the two terms are frequently used interchangeably, there might be some advantage to making a distinction between them. Fundamentally, a subsidy is a gift: a one-way transaction, without provision for repayment. Public aids, on the other hand, are often in the nature of temporary grants or loans: two-way transactions, with definite provision for reimbursement of the public treasury. It is important to note that public aids may include subsidies as well as temporary aids which are eventually repaid in some tangible way.

A recent study entitled *Subsidies to Transportation*, by Burton N. Behling, published by the Library of Congress Legislative Reference Service, states that "in addition to the element of direct subsidy included in air-mail payments to the domestic and U.S. flag international airlines, these carriers also are subsidized (indirectly) by the provision of airport and airway facilities and other navigation aids."[2] The airlines have also benefited from government aeronautical research and development and this type of aid may become more important if

---

[2] *Public Affairs Bulletin*, No. 86 (August, 1950), p. 30.

Congress decides to finance the development of "prototype" aircraft for both civil and military purposes.

In order to assist an infant air transport industry, Congress in 1938 authorized the payment of subsidies, in the form of air-mail pay, to meet the legitimate financial needs of the certificated air carriers.[3] The valid measure of the amount of subsidy to the carriers receiving air-mail payments is the excess of such payments over the costs to the carriers of rendering the air-mail service, including a reasonable allowance for return on investment.[4] In recent years air-mail payments have increased substantially—from 46 million dollars to all air carriers in 1946 to 112 million in 1949. In addition, in 1949 the carriers received 30 million dollars in retroactive mail pay to cover their losses before 1949. When various witnesses were asked how much of the air-mail pay represented subsidy, no one could say. Estimates ranged from 40 to 60 per cent.[5] The problem was sized up thus by Postmaster General Donaldson:

> The total cost for both domestic and foreign air mail this year . . . is, in round numbers, about $120 million, and by the highest stretch of the imagination you could not presume to state that the subsidy would be more than half of that, if that much. . . . I have my doubts about the subsidy being more than around $35 million, but nobody has yet determined what is the fair and reasonable rate we should pay for this service that is performed for us, and until somebody determines what we ought to pay the air carrier for the service he performs for us and what is the right rate of pay we should pay him, then and only then can you separate the subsidy from the total payment.[6]

There has come to be general agreement not only among committees of Congress and government agencies concerned, but also among some of the scheduled air-mail carriers that subsidy should be separated from mail pay. For instance, President E. V. Rickenbacker, of Eastern Air Lines, told the Senate Interstate and Foreign Commerce Committee:

> A tragic error which has been committed by the CAB and by many of the leaders of the industry has been the assumption that Section 2 and Section 406—the mail pay section—of the act have set air transportation apart from all other businesses and have made it immune to the grim necessities of sound business practices and have promised it a blank check and have guaranteed each air carrier a livelihood at the expense of the taxpayer. (*Ibid.*, page 1112.)

In an interim report submitted May 5, 1950, to the Senate Appropriations Committee, Senator Johnson recommended that subsidy be separated from air-mail payments. However, he suggested that the direct subsidy for domestic air transportation "should be specifically identified and presented to Congress on a community basis." His report referred to significant evidence collected by his committee that, in general, airlines carrying only a long-haul business and servicing but a few high-density points could operate profitably without direct subsidy.[7] Thus considerable attention is currently being given to the direct subsidy element in air-mail pay. But what about the indirect subsidies to commercial air transportation through provision of airways and airports at public expense?

---

[3] Article by Senator Edwin C. Johnson, "Proposed Senate Action on Air Mail Subsidies," *Journal of Air Law and Commerce*, Summer, 1950, p. 253.

[4] *Public Aids to Domestic Transportation*, U. S. Board of Investigation and Research (H.Doc. 159, 79th Cong., 1st sess., staff report), p. 75.

[5] Article by Senator Edwin C. Johnson, *op. cit.*, p. 254.

[6] *Air-line Industry Investigation*, *op. cit.*, pp. 1296, 1298.

Taxpayers of the United States have an investment of about one and one-half billion dollars in civil airports. Of the larger airports, which are financed by federal, state, and local appropriations, only a handful are self-supporting even to the extent of returning out-of-pocket operating and maintenance expenses.[8] The Federal Aid Airport Program for the 1951 fiscal year involves a total expenditure of 51 million dollars of which 25 million are federal funds and 26 million are state and local funds.[9]

From its inception in 1925 through the year 1949 total expenditures on the Federal Airways System amounted to 478 million dollars of which nearly three-fourths was for operation and maintenance and the remainder was classed as "cost of establishment."[10] According to the federal budget, expenditures for the development, installation, and operation of airway facilities are estimated at 136 million dollars for the fiscal year 1951. As now projected, the system of electronic airway navigation aids under the so-called "SC-31" program is expected to require fifteen years for completion and will cost an estimated 1,113 million dollars.[11]

The problem in connection with airport and airway aids is to determine the proper shares attributable to the several classes of beneficiaries—government and the military, private flying, and commercial airlines. Then arises the question of suitable user charges. To date the airlines have paid no user charges for the federal airways facilities and other navigation aids. However, the Civil Aeronautics Administration has proposed that "the initial step toward making the Federal Airways self-supporting begin in 1953, with a tax of 1.5 cents per gallon on high-octane aviation gasoline." The estimated return from such a tax would be 8.5 million dollars annually. (*Ibid.*, page 44.)

---

[7] "Separation of Air Mail Pay from Subsidy," committee report reproduced in *Journal of Air Law and Commerce*, Summer, 1950, pp. 333-346.

[8] *Air-line Industry Investigation* (testimony of D. W. Rentzel, Administrator of Civil Aeronautics, April 14, 1949), p. 177.

[9] *Competitive Transportation Review* (Association of American Railroads), November, 1950, p. 10.

[10] Charles L. Dearing and Wilfred Owen, *National Transportation Policy* (Brookings Institution, 1949), p. 21.

[11] Burton N. Behling, *op. cit.*, p. 43.

Commercial airlines ordinarily pay airport landing fees at rates determined by negotiations between the municipality and the carrier. Through landing fees and other revenue sources, including terminal building concessions, it is believed that within a comparatively few years the majority of the large terminal-type airports can be made self-supporting.[12] In June last year a spokesman for the United States Chamber of Commerce recommended to a House subcommittee that the Federal Airport Act should be amended to exclude local and personal flying airports and all airport buildings and land from participation in federal aid and make it clear that federal aid funds should not be made available for airport maintenance. The funds, he added, should be restricted to the federal share of costs of grading, drainage, runway construction, lighting, and radio aids to navigation at airports of interstate importance.[13]

Infant Industry and Defense Considerations. Direct air-mail subsidies and indirect airway and airport aids to air commerce have been justified on the two grounds of infant industry and national defense. It has long been a tradition in this country to encourage the early growth of desired transport techniques through public aids and subsidies. While there is feeling in some quarters that commercial air transportation is no longer an infant industry and has passed the stage of "coddling and wet nursing," the defense argument nevertheless still weighs heavily. To appreciate this we need only refer to the *Report of the Congressional Aviation Policy Board* (1948) which states:

> Airway facilities which give scheduled dependability to civil air lines also give tactical dependability to military air forces. Airports which serve the burden of national and international traffic also can base tactical or strategic combat squadrons. Transport fleets which serve commerce in peace can tie together tactical and administrative requirements in war.

From the military viewpoint, it would seem that an industry with the maximum number of modern planes and trained personnel is desired as a potential reservoir to draw upon in an emergency.[14]

In view of defense considerations it may seem academic to anticipate a self-sustaining system of commercial air transport in the near future. Nevertheless, this should not be abandoned as a long-term goal. In the meantime it seems highly desirable to make a reasonable attempt to earmark and budget those public funds devoted to air commerce on behalf of national defense. There are questions of economics which cannot be overlooked in the logistics of all-out modern war. As stated by the Secretary of Defense in his report for 1948:

---

[12] Lynn L. Bollinger, Alan Passen, and Robert McElfresh, *Terminal Airport Financing and Management* (Harvard University, Graduate School of Business Administration, Division of Research, 1946), p. 4.

[13] *Competitive Transportation Review, op. cit.*, July, 1950, p. 9.

[14] *Air-line Industry Investigation, op. cit.* (statement by Richard Hellman), p. 2124.

> One of the great problems from which the Military Establishment cannot divorce itself is the complex one of securing proper balance between military necessities and national solvency. The capacity for making war is not separable from economics any more than it is from diplomacy.

Regulation of Competition. How much competition is desirable in commercial air transportation? Is excessive competition responsible for the postwar financial difficulties of the airlines? If competition is to be controlled, what standards should guide such control? What effects might result from modifying or relinquishing some of the present controls over competition? What effects might result from continuing or intensifying present restrictions on competition?

Many airline witnesses appearing during the Senate Air-line Industry Investigation have criticized the Civil Aeronautics Board for excessive "duplication and triplication of routes" resulting from overly liberal issuance of certificates of public convenience and necessity.[15] However, the Chairman of the Board took the position that over-optimism with regard to the postwar expansion of the air transport market was not solely confined to the Civil Aeronautics Board. (*Ibid.*, pages 55 and 60.) Had not the carriers who now complained of excessive competition been the very carriers who had requested and received the majority of the additional routes approved by the Board after lengthy hearings? Suppose the market had expanded and the Board had been extremely conservative in approving new routes and route extensions, would the Board then have been guilty of stifling a dynamic industry or encouraging monopolistic tendencies? Hindsight is always better than foresight.

What policy has been prescribed by the Congress with regard to regulation of competition in air transportation? The Declaration of Policy in the Civil Aeronautics Act (Section 2) directs the Board to consider the matter of competition as follows:

> (c) The promotion of adequate, economical and efficient service by air carriers at reasonable charges, without unjust discriminations, undue preferences or advantages, or unfair or destructive competitive practices; (d) Competition to the extent necessary to assure the sound development of an air transportation system properly adapted to the needs of the foreign and domestic commerce of the United States, of the Postal Service and of the national defense.

It is clear from this that our public policy generally favors competition with the exception of unfair or destructive competitive practices. Congress left it to the Board to determine the extent of competition necessary to assure the sound development of air transportation.

The Air Route Pattern. The present air route pattern is the result of competition and the combined judgment of the Post Office Department and the Civil Aeronautics Board. Competitive bidding for air-mail contracts produced the basic pattern of the 39,267-mile domestic system in 1938 which constituted the so-called "grandfather routes" inherited by the Civil Aeronautics Board from the Post Office Department. Subsequently, competitive applications for certificates of public convenience and necessity awarded upon basis of the judgment of the Board caused the domestic routes to expand from 39,000 miles to 146,000 miles and the international and overseas routes from 31,000 miles to 210,000 miles.[16] Eloquent testimony, copious briefs, and a most convincing array of exhibits were showered on the Board. The public, represented by chambers of commerce, frequently asked leave to intervene, always in favor of new routes or route extensions proposed. About the only opposition came from other air carriers whose motives were somewhat transparent. Statistical trends pointed upward. It is not surprising that the Civil Aeronautics Board found its "sales resistance" no match for such enthusiasm.

---

[15] *Ibid.* (testimony of Messrs. Patterson, Smith, and Rickenbacker), pp. 671, 742, and 1127.

Now, however, the tide has turned; competition in air transportation is believed by many to be excessive. But how much competition is just the right amount? How much is too much? At the present time, we have sixteen common carrier trunk lines, seventeen feeder lines, and two helicopter services operating under "permanent" or "temporary" certificates.[17] We also have a considerable number of nonscheduled so-called "irregular air carriers" providing low-price "air coach" service and three certified air-freight carriers. Neither the irregulars nor the air-freight carriers receive any air-mail subsidy. While this list is not complete, it may be said to fairly represent the amount of competition now present in the air transport system of the United States. Is this too much competition? Are there now too many air carriers? Would it be sound public policy to freeze the existing competitive pattern of common carriers? Should the existing domestic route pattern serving some six hundred cities be established as the permanent inflexible sovereignty of the existing certificate-holders? Shall the future competitive pattern be static or dynamic? Shall all newcomers, even when not desirous of mail subsidy, be considered to be undesirable "interlopers" molesting the transquility and stability of the protected oligopoly of "pioneers"? Shall the wings of commercial flying be clipped in order to accomplish a public utility status in air transportation by legislative fiat in spite of the fact that air transportation lacks the economic characteristics of typical public utility industries?

Shall Air Transport Be Regulated as a Public Utility? Today, the public utility concept has become so broad as to practically defy clear definition. The term is used to cover a variety of unlike situations. Unfortunately, the indiscriminate use of the term public utility has led to the assumption that all so-called "public utilities" should be subjected to the same type of public regulation. Thus not only railroads but motor, water, and air carriers are loosely called "public utilities" despite vast differences between the economic characteristics of these transportation industries as compared with the typical characteristics of gas, electric power, and telephone utilities.

---

[16] Russell B. Adams, "The Air Route Pattern Problem," *Journal of Air Law and Commerce*, Spring, 1950, p. 127.

[17] Article by Senator Edwin C. Johnson, *op. cit.*, p. 253.

The traditional purpose of public utility regulation was to protect the consumers from the results of the "natural monopoly" characteristics of railroads as well as gas, electric, and telephone utilities. Yet the philosophy of railroad regulation still attempts to enforce competition between railroads, whereas in the gas, electric, and telephone utilities our regulatory policy long ago abandoned enforced competition in favor of closely regulated monopoly or duopoly. Still the railroads had (until 1920 at least) sufficient monopoly power to justify similar types of controls as were applied to the other monopolistic utilities.

After 1920, federal regulation of railroads took on the somewhat contradictory policy of protection to existing carriers (at least in lip service), combined with traditional restraint of monopoly by enforcement of competition and control of prices and services. Government then took on the role of entrepreneur as well as that of policeman. As is well known, railroads are today so completely regulated as to have lost nearly all of the prerogatives of management essential to competitive private enterprise.

In 1935, largely upon the recommendation of the railroads and certain government agencies, the Motor Carrier Act was passed, containing nearly all of the contradictory elements which had developed during the previous half century of railroad regulation. Then in 1938 the Civil Aeronautics Act was passed containing control of entry and many other provisions literally copied from the Motor Carrier Act. It is significant that both of these laws were passed with the declared purpose of stabilizing both the motor carrier and air carrier industries. Conditions in each of these new transport industries prior to federal regulation were said to be chaotic. Yet neither motor nor air transportation regulation was the result of the public clamor which demanded restrictive regulation of the railroads. Perhaps the shipping and traveling public preferred the so-called "chaos" of free competition as compared with the "stability of government control." Very significantly it was not the public but the larger and stronger of the existing air carriers in 1938 who asked a most obliging federal government to assume the same dual rôle of entrepreneur and policeman which it had been performing for the railroads since 1920. Temporary security was won by the sacrifice of future freedom.

Yet the Congress in the Civil Aeronautics Act was unable to reach the conclusion that air transportation conformed to the ordinary concept of a public utility. The Congress "was trying to evolve a type of regulation which would keep the benefits of competition. It was attempting to combine the best features of the regulation of public utilities and competition under the private enterprise system."[18]

As stated by former Chairman O'Connell of the Civil Aeronautics Board:

> There are at least some reasons to believe that the inevitability of the monopoly idea is not as present (in the air transport industry) as in some types of industries. . . . You do not have the terrific amount of fixed capital investment . . . in the aviation business, which is involved in electric-light plants or other utilities, as well as the railroads. The capital investment is very small. (*Ibid.*, page 54.)

It may be added that, while it requires more capital to engage in air transport than in motor transport, the amount in either case is minuscule as compared with that required to build a railroad or a gas plant. Actually it may be said that the only way to achieve conditions approaching monopoly in air transport is by closely restricting entry to this industry.

Public Utility Regulation versus Responsible Free Competition. The largest part of the investment in an airline consists of aircraft, which, being of fairly standard design, are an extremely mobile form of capital. This facilitates both the entrance and exit of capital from the industry in contrast to the great immobility of railroad and utility plant capital. Another significant difference between the airlines which Senator Johnson calls "quasi-utilities" (*op. cit.*, page 257) and the typical utility industries is in the ratio of fixed and variable costs. As presently operated, by far the largest proportion of airline costs is variable—a very small proportion is fixed. Ordinary public utilities, on the other hand, are faced with a large element of fixed cost. The desire for combination—to achieve large-scale efficiency and decreasing costs—plus a strong motive for discriminatory pricing, is thus logical in the ordinary utilities and in the railroad business. These economic characteristics are not evident to any appreciable extent in the air transport industry of the present day.

Aside from the element of monopoly control present in public utility regulation, there are also practical physical limitations which argue against competitive gas mains, power lines, or streetcar lines down city streets. While the physical limitations of a single airport and its approaches are undeniably limited, the limitations against additional airports are more often economic than physical. Furthermore, the majority of our airports today are substantially underutilized. It is certain that most airports would welcome more competitive air transport services in place of restricted competition. Can anyone think of a single case of a municipality objecting to the Civil Aeronautics Board certifying additional air carriers to serve its airport or airports? As for the airspace, is there any medium available to domestic and world commerce which is as limitless? Here again, economic limitations, it would appear, are more controlling than physical limitations.

---

[18] *Air-line Industry Investigation, op. cit.*, p. 53. Joseph J. O'Connell, Chairman of the Civil Aeronautics Board in reply to Senator Bricker, who had said: "A public utility generally is considered to be more efficient if it is not competitive. . . . Competition in the public utility field is always inefficient if you have sufficient and adequate public regulation."

New electronic aids to air navigation, including the omnidirectional ranges (of which 294 are now in operation of a planned 409), will make possible relatively unobstructed traffic between domestic air terminals and promise to vastly improve the safety and dependability of air transportation.[19] The "omnirange" provides a large number of courses. Allowing a course width of 15 degrees, for example, there are 24 flight paths to or from the range.

Since neither natural monopoly considerations nor physical limitations argue against relatively free competition in air transportation, we are left with the question of which policy will yield the greatest fruits: public utility regulation or responsible free competition. It is believed by the writer that responsible free competition is vastly superior to irresponsible, uncontrolled competition. It is also believed to be superior to competition arbitrarily restricted by considerations other than those of safe conduct and financial responsibility.[20]

Conclusion. It may be concluded that public policy toward commercial air transportation needs re-examination especially with regard to subsidy and restriction of competition. Perhaps the problem today is not too much competition but too much subsidized competition. Responsible free competition cannot succeed as long as the solvency of all competitors is guaranteed by the government. The first step—that of separating subsidy from air-mail pay—is already under way. The next step should be the recognition that air transportation is not inherently the type of industry which should be subjected to railroad or public utility regulation. Can responsible, fair competition ever be excessive? Granted, opening the door to ambitious but responsible newcomers may constantly threaten the stability of the "pioneers"; but will it not over the years improve the stability and virility of the air transport industry? Restraint of competition, on the other hand, inevitably leads to the substitution of bureaucratic controls for managerial freedom and initiative. In the long run it may easily lead to the socialization of transport. Maximum competition, only restricted to insure fairness and responsibility, has been the key to the great accomplishments of the American system of private enterprise. Let us consider carefully before abandoning this principle in our public policy toward commercial air transportation.

---

[19] *Air-line Industry Investigation, op. cit.* (statement by D. W. Rentzel, Administrator, Civil Aeronautics Administration), pp. 1944 and 1945.

[20] An interesting sidelight on this is revealed by the following excerpts from a telegram to the Civil Aeronautics Board signed by Governor Ernest Gruening, of Alaska: ". . . air transportation is indispensable to the life and economy of Alaska. The regular certificated carriers have not and do not begin to take care of Alaska's needs. . . . Alaska is absolutely dependent upon the service now provided by the nonscheduled and irregular carriers. It would be a crippling blow to our entire economy to restrict them." (*Air-line Industry Investigation, op. cit.*, p. 1197.) It may well be that the Alaskan conditions referred to here are unique and temporary in some respects.

DISCUSSION

William H. Thompson: The phenomenal increase in motor vehicle registrations and vehicle miles of travel during the past decade offers ample evidence of the rising importance of highway transportation. This development has emphasized the major issues involved in the competition for traffic between rail and motor carriers and growing public awareness of defects in promotional and regulatory policy. Increasingly, demands are made from all quarters for remedial and constructive action; so that each facility may perform the services necessary to sound economic growth in the manner best adapted to its individual characteristics. Involved, too, is the problem of equitably dividing financial responsibility among users and beneficiaries in an expanded highway program estimated to cost some 4 billion dollars annually nationwide during the period 1950-60.[1]

Time does not permit a full discussion of the issues raised in Dr. Nelson's stimulating and challenging paper. Therefore, I shall concentrate on one or two of his conclusions with a full knowledge that my interpretation and emphasis may be completely foreign to that intended by the author. If it were possible to define highway investment accurately in terms of social and economic need, I would agree that a fairly stable criterion existed for measuring resource and traffic allocation between these agencies. Instead, public investment is too often justified under vague generalities and with little regard to the stated objectives of transportation policy. I believe this point is given implied recognition by Professor Nelson in his concern over possible suppression of sound peacetime economic highway development when and if such expansion means curtailment of uneconomic railway services. I do not share in his alarm. Too many individuals, groups, and communities have experienced the advantages of highway transportation and have adjusted private and commercial lives accordingly. Rather, I fear that future policy might extend public investment out of all proportion to requirements under programs in which political appeasement and "public welfare" considerations loom large.

Assuming more objectivity in channeling public highway funds and a definition of user charges as those which cover true economic costs, I accept the conclusion that long-term basic trends in traffic division between rail and highway carriers are fairly tenable. But herein lies the difficulty which has given rise to much of the present controversy. Are user charges adequately covering construction and maintenance expenditures on that portion of the plant devoted to motor vehicle operation charged in such a way that prices for the services are performing a true allocation function? Frankly, I do not know the answer. Being blessed or cursed with an accounting background, when I attempt to find a practical solution to this practical question, I find myself in a state of frustration. In this respect, Dr. Nelson concedes that user payments may be higher than true costs in some states, lower in others.

---

[1] G. P. St. Clair, "Nation Wide Requirements of the Highway Program," National Tax Association, *Proceedings of the Forty-First National Conference*, 1948, p. 185.

Either method of vehicle taxation will produce traffic and resource distortion. Until more cost accounting data is forthcoming, I cannot admit the accuracy of allocation studies between railroads and motor vehicles.

As pointed out in this excellent paper, the basis of determining highway investment policy lies partly in the development of a cost standard which can be universally applied to allocate the tax burden. Economists and transportation students generally support the view that our modern highway plant is a multi-purpose facility yielding benefits to individuals and communities to a widely varying degree. Precise cost accounting between general taxpayers and vehicle users as yet cannot be determined on the basis of economic reasoning. Dr. Burton Behling expressed the difficulty thus: "When all is said and done there are some problems which cannot be solved by statistical methodology. With respect to the problem presented here, which involves joint costs and responsibilities, scientific allocations are impossible; a striving for definitiveness which is non-existent can only give results which are deceptive in their apparent exactness."[2]

It is logically possible to view the highway function from any or all of four viewpoints: (1) as a general government function to be financed by general taxation; (2) as a special government function to be financed by vehicle users; (3) as a public business enterprise, with vehicle user taxes regarded as prices or fees paid for road use; and (4) as a combination of a governmental function and a public business enterprise.[3] Since a mixture of social and individual benefits flow from highways, the relative shares in highway support assigned to the benefited groups necessarily depend upon the relative importance attached to each. Weighting these shares will tend to vary considerably as between states and regions, and consequently further tend to promote maldistribution in traffic and resource allocation. Even if general agreement were possible on a correct cost standard to be used as the base, it does not necessarily follow that local or national distribution of revenues among the various highway systems can or would be based on factors which would stimulate an economic distribution of traffic.

Whether or not we agree on the matter of public subsidy to highway carriers, there is conclusive evidence that subsidies do exist in and among the various classes of motor vehicles. Studies in Iowa support Dr. Nelson's observation that passenger cars and light trucks seem to bear heavier user charges than those paid by heavy trucks. Statistics from our Highway Commission indicate a differential of approximately 2½ mills per ton-mile costs as between trucks of three to five tons and those twenty tons and over, with the latter class most heavily favored. On the other hand, heavy vehicles operated on primary and secondary roads feel keenly that their taxes are not being distributed among the highway systems on the basis of reasonable need. However, it is doubtful that a shift in the incidence of highway taxes from private to commercial users would alleviate the railroad difficulty.

---

[2] Burton N. Behling, "Public Aids to Domestic Transportation," S. Doc. 159, 79th Cong., 1st sess. (1944), p. 252.

[3] Edward D. Allen, "Analysis of Highway Costs and Highway Taxation With an Application to Story County, Iowa," *Iowa State College Bulletin*, No. 15, 1941.

As presently constituted the state-managed highway plant appears to enjoy a preferred position in the investment market when compared to the privately owned and managed railroad facility. Whether or not public support of railway right-of-way would tend to equalize the relative competitive position of each agency is open to question. I have always considered this proposal as a step intermediate between private and government ownership, but perhaps the occasion demands its consideration now. As mentioned earlier, I am concerned over the ever increasing demands upon government for economic assistance, and if history teaches any lessons, it should be apparent that public aid creates more problems than are solved. As an alternative suggestion, I would favor granting railroad management more freedom on matters of right-of-way abandonment than is possible at present. Economies effected would benefit both railroads and highway users. Also, this proposal might indicate that our railroads, in the welter of conflicting promotional and regulatory policies, have not been regarded as the lost child.

In war or peace this nation can no longer afford luxuries of waste which may be occurring in the transportation industry. If uneconomical expenditures are being made, efforts must be directed to their elimination regardless of how one or another individual agency may fare as a result. Studies of the type recently completed by Dr. Nelson for the state of Washington will go far toward a solution of the rail-highway problem. But similar inquiries may be impossible to complete as defense or war requirements direct our energies elsewhere. In the meantime the issues not only remain unsolved but will probably grow in scope and intensity when we can again return to peaceful pursuits.

PAUL M. ZEIS: Despite the heavy volume of business through the last decade, the railroads have failed to share to any considerable degree in the financial prosperity which most American business enterprises have enjoyed. Professor Williams, in his highly interesting and illuminating paper, has indicated a number of reasons for the situation and has suggested a variety of remedies designed to strengthen the position of the railroad industry in the future. Many of these remedies must of necessity be provided by the carriers themselves, but some steps can be taken by governmental authority. Whether these steps will in fact be taken is open to question since, as Professor Williams has indicated, the Interstate Commerce Commission has thus far failed to follow a consistent policy in its regulation of the carriers, and governmental promotional activities concerned with other forms of transportation have shown no signs of diminishing. It is conceivable that within the next few years the type of user charges suggested by Professor Williams might be instituted but the prospects of this change of policy becoming effective are slight. It should be noted, however, that through the gasoline tax a form of user charge is imposed on highway carriers although there is considerable argument as to whether the tax is sufficiently heavy as applied to trucks to compensate for the benefits received. It should also be noted, as Professor Williams points out, that government assistance to other forms of transportation is responsible only to a small degree for the railroads' financial difficulties.

Perhaps the chief weakness in Professor Williams' historical review of the events of the past few years is the failure to give sufficient attention to the impact upon the rail carriers of the lag between rising prices and costs on the one hand and increased rates on the other. While substantial rate increases have been granted, such increases usually came after general price rises had occurred and to some extent were insufficient to cover the extent of the change in the general price level. The other significant factor in the relatively poor financial showing of the railroads during the past four or five years has been the sharp decline in passenger traffic and passenger revenues which was not accompanied by a corresponding reduction in the cost devoted to the passenger service. Steps are now being taken to obtain more adequate mail revenues and to minimize the losses occasioned in the head-end part of the passenger business, but the possibly drastic changes in volume and type of passenger service which should be made have not in general taken place. To no small extent, the reason for this is the difficulty in obtaining regulatory approval, whether state or federal, for the abandonment of unprofitable services or for the drastic increases in rates which would be required to convert certain types of passenger operations into self-sustaining services.

Among the remedies for the railroads' difficulties which Professor Williams suggests are the reduction of the unprofitable passenger service, the pooling of merchandise services, and increased rates on less-than-carload traffic—a type of service in which a significant proportion of the rail plant and equipment is employed with unsatisfactory results, both as to tonnage moved and to revenues received. All these suggestions appear worth while and all should receive more attention from the carriers and the regulatory authorities than they have thus far obtained.

Certain other parts of Professor Williams' paper are open to more dispute. We are told that value of service considerations must remain an important part of rate policy and that many low-grade commodities cannot bear their appropriate share of the load since otherwise they would not move or their length of movement would be restricted. In an effort to preserve traffic volume, the author sanctions the use of volume and agreed rates where necessary as a means of keeping the traffic out of the hands either of private carriage or of common and contract operators in the motor, water, and pipe-line fields. Such proposals seem likely to render the rate structure even more discriminatory than it is at the present time, and it is dubious whether they are desirable either from the interests of the shipping public or from the interests of rail carriers themselves.

Many of the difficulties with which the rail industry is now confronted have arisen as the result of the efforts of the past thirty years to maintain the maximum volume of traffic through whatever rate concessions appeared necessary at any given moment to obtain or retain particular increments of traffic. As a result many railroad services are performed at a loss and this applies even in the case of some carload traffic. From every indication the next decade is going to represent a period of steady growth of the economy and a period of steady increase in traffic offered for shipment. While the relative share of the total traffic handled by the railroads may decline, the actual volume is likely to continue, not only at present high levels, but to increase. The railroads are seeking to obtain new motive power and new car facilities on the assumption that they simply do not have enough to handle the load which will be placed upon them. In a full production economy, the policy of endeavoring to retain every possible ounce of traffic, even if it involves rates which fail to meet the full cost of service, does not appear to be a wise program for the carriers to suggest and the regulating authorities to approve.

Such a program may have had some merit during the depths of the depression when the carriers had extensive unutilized facilities but it certainly does not seem applicable at this time. Now, if ever, would be the appropriate time, not for general rate increases, but for selective rate adjustments aimed at placing a fairer share of the transport burden on those commodities and those shippers which have been obtaining a free ride. A review of the major commodities from the tonnage standpoint being handled by the railroads at depressed rates suggests that with few exceptions substantial increases could be imposed without a serious loss of traffic. This is particularly true of commodities involved in the production of iron and steel, of agricultural commodities generally, and of some, although not all, construction materials.

Undoubtedly the general raising of depressed rates would have some impact upon the underlying producers and upon the volume and direction of traffic but during periods of relatively full employment and production, such as are likely to prevail in the next few years, this impact would be far less than most people imagine. Only in exceptional cases would there be any significant shift in production areas or markets. Moreover, any shift to water transport which might result would likewise be of comparatively small significance and would apply only to limited areas. Some diversion of traffic to trucks would also occur but because of the nature of the commodities and the relatively low rates involved, the diversion would be limited for the most part to relatively short-haul shipments.

In this connection it is pertinent to point out that with few exceptions water transportation constitutes a relatively unimportant competitor to the railroads. The bulk carriers on the Great Lakes and the tankers in the coastwise service represent the most significant water services in which any great volume of traffic is handled. Pipe lines furnish only a specialized form of competition with the railroads. The real competitor of the railroad is the motor truck and it is this form of transport which has made serious inroads in rail revenues. As Professor Williams points out, these inroads have been at the expense of the high-rated traffic. The trucks obtain the traffic, however, not by virtue of their low costs but as a result of their superior service and their ability to undercut the rate structure which the rail carriers have tried to maintain on high-rated traffic. For all but relatively short hauls for traffic of carload proportions the railroads still appear to have a distinct cost advantage over their motor competitors. Improved service and a rate structure more closely related to cost would have the result of retaining the high-grade traffic for the railroads, although at lower rates. Unless the railroads take steps to eliminate their unprofitable services and to raise their depressed rates, they will not be in financial position to make the necessary rate adjustments on the high-grade traffic which they are now losing to the motor carriers.

Government policy in the future can move in two general directions in an effort to preserve the railroad industry. On the one hand, it can place increasingly severe restrictions on the railroads' competitors, eliminate or drastically reduce private carriage, and through one means or another force the traffic to move over the railroads. On the other hand, it can free the rail carriers of their obligations to maintain unprofitable services and can foster and promote a rate policy aimed at having each major type of traffic bear its fair share of the load. The latter approach would appear preferable in the interest of obtaining the most effective and efficient use of all kinds of transportation and in the interest of the long-range prosperity of the railroad industry. If progress is to be made in this second direction, the time for action is now when the necessary dislocations which would result are at a minimum.

JOHN P. CARTER: I find myself in general agreement with Professor Berge. I agree that the main issues are those of subsidy and competition. I also feel, intuitively rather than analytically, that his conclusions that there should be more competition and that subsidies, while objectionable, cannot be avoided for the present are correct. The nature of the reasoning which leads both Professor Berge and myself to these conclusions, as well as the policy recommendations which follow from those conclusions, may well require some elaboration, and it is to that that I shall devote this short discussion.

There can be various definitions of subsidy, but in the absence of outright gifts perhaps the most supportable definition is that a subsidy is a payment in excess of the market value of the product sold. But the transportation of mail by air approaches the bilateral monopoly situation. There is one buyer, the post office, and usually one seller, the carrier. Under bilateral monopoly conditions, the market price is usually considered to be indeterminate. Instead there is a range, more or less wide, in which the actual price may be determined by bargaining, or, in this case, by certain statutory considerations. Where an air transport market is served by more than one carrier, the differential which the higher-rated carrier receives over the lower-rated carrier could at least be called "subsidy."

The Congressional policy, as stated in Sec. 2 (a) of the Civil Aeronautics Act of 1938, envisions an oversize air transportation system. The Act calls for a system sufficient for the present and future needs of the commerce, postal service, and the national defense. Such a system must be larger than the present commercial and postal markets will support, so that subsidies are unavoidable. However, that oversize system is required largely by military necessity. It might be reasonable, as Professor Berge suggests, to charge the national military establishment for all air transport over and above that supported by the commercial market.

The military might then also have a voice in the utilization of that money and in the choice of the equipment to be maintained with it. There is some evidence that present policies have not produced capacity in the right places for either military or commercial needs. While laymen are often poorly qualified to evaluate military requirements, it seems clear that transports auxiliary to the armed forces must be four-engine intercontinental aircraft. Our policy, on the other hand, gives greatest support, measured as dollars per ton-mile of mail transported, though not in total dollar payments, to local lines utilizing two-engine equipment, often the obsolete DC-3.

These local lines would also seem least warranted by commercial considerations, since the local carriers and the north-south "trunk" lines have generally poorer load factors than the transcontinental carriers. Present policy could reasonably be said to give greatest public support to those carriers who serve the public least. It might be better policy to give more public encouragement to the long-haul transcontinental services, which are more popular with the shipping and traveling public, even if that be at the expense of the local lines. A policy of encouraging the long-haul transcontinentals would concurrently contribute toward what is apparently the greatest military need in transport aircraft: long-range large equipment.

The total subsidy is not very large, as is indicated in Professor Berge's paper. As he points out, payments for the carriage of air-mail in 1949 were under 120 million dollars, of which the postmaster general estimated the subsidy at perhaps 35 million. I would be inclined to agree that the amount of mail pay which is obviously subsidy would be no higher than that figure. The question is less one of the amount of the subsidy, which is quite small in the context of today's federal budget, than one of whether the community is getting the best results from that outlay.

An alternative to present policy worth investigating is that of maintaining that portion of air transport capacity in excess of the amount which the commercial market will support, on a standby basis, supported directly by the armed forces. Thus aircraft might be maintained on a basis of readiness for flight, and flight personnel could maintain their skills in an active reserve of some form. The personnel could then be employed in another full-time occupation—a useful result in today's impending labor shortage. The determination of the services for which such a policy would constitute an appropriate substitute would require considerable research, but it might well be cheaper and more productive than running multiple daily schedules of DC-3s over routes where the government must provide 80 or 90 per cent of the revenue.

The problem of competition is, if anything, more important than that of subsidy, and certainly more difficult. Professor Berge reads from Section 2 of the Act a policy which generally favors competition. However, Congress was far from consistent on that problem. Section 401 of the Act provides that a certificate of public convenience and necessity be granted if the carrier is fit, willing, and able and if the proposed transportation is required by the public convenience and necessity; otherwise the application shall be denied. While Section 2 may be construed as favoring competition, Section 401 may be construed as instructing the Board to minimize competition. In view of the inconsistency of Congressional instructions, it is not surprising that the Board has failed to develop a firm and consistent policy.

In general, one might say that the Board has been rather liberal in extending new routes; so that there is usually more than one air route between each major pair of cities; but that the Board has been somewhat niggardly in permitting new management to enter the industry. New routes have been granted, if permanent, to one of the "pioneer" lines, and only if temporary to new managers. Of the thousands of veterans who entered the air transport industry five years ago, all but a few are long since bankrupt.

Professor Berge asks many questions on the place of competition in air transportation. His focus is on the question of whether air transportation should be treated as a public utility, which he questions because of the small investment required in air transport, or whether public policy should be one of encouraging responsible free competition.

At any rate, it does seem odd that the Congressional policy of maintaining an oversize air transportation system should be implemented by a policy of restricting the number of firms in the industry. That these policies be congruent requires the basic economic assumption that there are economies of scale in the air transport industry. The evidence on this point is conflicting, but it does seem that, among the permanently certificated lines, there are such economies. At least, there seem to be fixed costs, although the costs of additional ton-miles seem to be constant, implying a horizontal marginal cost function. It is also apparent that the average operating costs of larger certificated carriers are less than those of small certificated carriers. However, although comparable data are not publicly available, many irregular lines seem to have been able to operate successfully without any mail pay—perhaps because their maintenance and safety standards are lower; perhaps because they have been unable to afford the elaborate overhead establishment of the certificated lines. But there was almost certainly no evidence on the existence or lack of existence of economies of scale in the air transport industry in 1938. As Professor Berge points out, the then existing airlines asked for and received federal protection from chaotic competition.

Professor Berge does not define his concept of responsible free competition, but the notion could be filled in. Carriers could be permitted to experiment by freely entering the markets of their choice, while the stabilizing effect of the certificate could be achieved by requiring an abandonment certificate. Hearings for a certificate of abandonment could be conducted with the evidence of experience, instead of by pure conjecture as with the present prerequisite certificate. Free rate experimentation could also be permitted. With the California and transcontinental air coach experience, other markets might also offer profits in the exploitation of the elasticity of demand. Firm safety controls, with stronger government enforcement than now, would be required to avoid the experience which we have had with some irregulars.

As a conclusion, in conjunction with the opening of entry into the industry, subsidy might be paid on a plane-mile basis, varying in accordance with the type of equipment, and charged to the military establishment. Thus the most desirable military auxiliary equipment could be obtained by setting up appropriate differentials.

Professor Berge's paper points in the right direction, and it is to be hoped that policy makers will give heed to it.

PUBLIC UTILITIES AND NATIONAL POLICY

THE INTEGRATION OF THE ELECTRIC POWER INDUSTRY

By HORACE M. GRAY
University of Illinois

Viewed retrospectively, the year 1935 was "a time for decision" in the development of public policy with respect to the electric power industry. It was one of those crucial dates when a conjuncture of favorable circumstances not previously existent nor soon to be repeated created the opportunity for a great forward movement toward a more rational organization of the industry.

By 1935, fifteen years of intensive criticism, beginning with the Keller report[1] and terminating with the *National Power Survey,*[2] had exposed the defective organization of the electric power industry and delineated the essential features of an integrated power system. The Gargantuan frauds and distortions perpetrated by the promoters of holding companies had been portrayed in detail by an exhaustive public investigation.[3] Public confidence in the motives, capacity, and integrity of private utility management was at a low ebb, and there was an insistent demand for corrective public action. The federal government had launched an active public power program, involving hydro development, aid to state and municipal undertakings, and rural electrification—all of which created new and difficult problems of integration. State regulation had demonstrated its incompetence to deal with the organizational problem; federal regulation did not exist, except for the restricted function of licensing hydroelectric projects on navigable streams. The potentialities of available technology and natural resources and the social benefits of low-cost electric power were fairly well understood. The British grid system, established by the Electricity Act of 1926, had been in successful operation for nearly a decade and had attracted favorable attention in this country. Thus the time seemed ripe for constructive public action to transform this chaotic and inefficient industry into an integrated national system consonant with technical potentialities, available natural resources, and modern social needs.

---

[1] Colonel Charles Keller, *The Power Situation During the War* (War Department, 1921).

[2] *National Power Survey, Interim Report,* Power Series No. 1 (Federal Power Commission, 1935).

[3] *Utility Corporations, Summary Report* (Federal Trade Commission), especially No. 72-A and No. 73-A, 1935.

In the Pennsylvania giant power survey, a clear distinction was drawn between integration (the pooling of total supply) and interconnection (the disposal of surplus, according to the usage of private companies).[4] This is a basic distinction which even today spokesmen for private concerns fail to recognize.[5] Within this broad concept of integration, the Board visualized a common pool into which power from all sources (public and private; steam and hydro) would be poured and out of which current for all uses and by all types of users would be taken. Every producer would contribute to the total supply and every potential consumer would enjoy free access to the common pool. Production would be centralized in large-scale, interconnected steam plants located at or near coal mines and utilizing the coal residues from by-products processing plants. All available hydro power would be developed and integrated into the general system. The function of distribution, which lends itself to small-scale organization, would be performed by local agencies—public, private, and co-operative—all of whom would derive their supplies from the pool.[6]

This pioneer effort was premature and failed of fruition, but the basic idea survived the ensuing speculative orgy of the late twenties and early thirties to reappear in subsequent national reports. In 1934 the Mississippi Valley Committee of the Public Works Administration advocated a completely integrated system, for which it affirmed that "the result will eventually be a single ocean of energy embracing every power source whether publicly or privately owned." (Report, October 1, 1934, page 47.) The Committee pointed out the lack of integration among both private and public suppliers as follows:

> The need for coordination and unification is emphasized by an examination of the two accompanying maps—one showing the fields of operation of the leading private electric

---

[4] *Giant Power* (The Report of the Pennsylvania Giant Power Survey Board, February, 1925), p. vii and pp. 23-26. See also three earlier reports: the Keller Report (cited above); *A Superpower System for the Region between Boston and Washington* (U. S. Geological Survey, Professional Paper 123, 1921); the *Northeastern Super-Power Committee Report* (Herbert Hoover, Secretary of Commerce, Chairman), May, 1924.

[5] This was aptly expressed by A. A. Potter in the report of the National Resources Committee, *Technological Trends and National Policy* (June, 1937), at p. 269, where, describing the private view of transmission, he said: "It is doubtful, however, as to whether this [interconnection] should be extended greatly, as interconnection has as its major objective emergency transfer of energy from the fringe of one power system to the fringe of another power system." For a similar usage of interconnection see the testimony of Joseph J. A. Jessel, Chief, Transmission Section, Electrical Division, Bureau of Power, Federal Power Commission, before the Subcommittee of the Committee on Interstate and Foreign Commerce, House of Representatives, 80th Cong., 1st sess. (1947), on H.R. 2972 and H.R. 2973, pp. 653-663. Mr. Jessel, after asserting that 70 per cent (or 28,000,000 of 40,000,000 kilowatts) of private utility generating capacity is interconnected conceded that many of these interconnections are of limited capacity and used only for emergency transfers of energy.

[6] Summarized from the report, especially from the "General Report" of the Director, pp. 13-46. The reader will note the similarity between this proposed system and the scheme for rationalization of electricity supply in Great Britain, established by the Electricity Act of 1926.

> power groups and the other the plants owned and operated by municipalities. The first has been called a "crazy patchwork" of operating areas, but the second is likewise a mass of independent, unrelated, and frequently uneconomic generating units. All concerned suffer from isolation. (*Idem,* page 47.)

The Committee went on to recommend the desirability of "the progressive building of group and regional and interregional transmission networks." (*Idem,* page 47.) To accomplish this objective it advocated government leadership and direction, particularly in the development of hydroelectric resources and the building of transmission lines. It was contemplated that the transmission system would be operated as a common carrier after the fashion of the British grid. (*Idem,* page 49.)

A few months later the National Resources Board elaborated the advantages of regional integration in terms of economy in the utilization of capital:

> Experience indicates that marked economies are effected when interconnecting transmission lines are built to tie all generating units and all the consumers of a wide area into one circuit. Without such lines, each generating unit and its market are isolated. The generating unit must provide for a peak load which is much higher than the average load. The interconnecting of many markets and many generating units makes it possible for the peak loads in different uses to offset one another in the course of 24 hours, so that the maximum peak load can be brought much nearer to total generating capacity than in the isolated unit. The total investment required for a given standard of service is thus greatly reduced by interconnection, and with the investment the necessary charge to consumers is also reduced. (National Resources Board Report, December, 1934, pages 39-40.)

The Board cited examples to prove its point. In the Keokuk-St. Louis to Detroit area (including Chicago and Milwaukee) the total generating capacity of 4,585,000 kilowatts was used only 66 per cent at maximum peak load. Assuming 15 per cent as a normal reserve, this situation involved 1,086,000 kilowatts of excess capacity, representing an investment of 108 million dollars of idle capital on which consumers were required to pay a fair return. Similar situations were found in Pennsylvania, New York, and New Jersey, where excess generating capacity over maximum peak loads ranged from 30 to 37 per cent. (*Idem,* page 40.) Such excess capacity, the Board pointed out, was not necessary to meet regional needs on a fully integrated basis but was regarded as necessary for the security of supply in non-integrated systems.

In the same year (1934), Mr. M. M. Samuels, a distinguished engineer then with the Federal Power Commission, summarized the advantages of integration as follows:[7]

> 1. Reduction of fixed charges and resulting reduction in rates by improvement in plant factors and utilization factors and a reduction of energy losses.

---

[7] First published in *Electric Light and Power,* November, 1934, under the title, "Future System Planning and Station Design Rationalized," and reproduced in summary form in *Technological Trends and National Policy,* report of the National Resources Committee, June, 1937, at p. 282. The above quotation is taken from the latter source. See also pp. 270-278 for a trenchant criticism by Samuels of the inadequacies of existing transmission systems.

2. Better provision for emergencies, such as floods, strikes, wars, or other sudden disturbances.
3. A more elaborate network of transmission, making power available at low rates where it is not now available at all or can only be made available at high cost.
4. A better utilization of the water-power resources of the country and saving of fuel.
5. Decentralization of industry....
6. Better utilization for electric transmission of the facilities owned by other utilities, such as railroad rights-of-way, pipe-line rights-of-way, etc.
7. Coordination by utilities with power-houses owned by industrial establishments for better utilization of the power facilities by both.
8. Transmission over greater distances at night or other off-peak, low-load periods for better utilization of water power that would otherwise go to waste.
9. A more rational handling of the peak problem, with the possible provision of generator units at peak-load locations, making it unnecessary to design the whole system for peak load.

In 1935, the Power Authority of the State of New York, after a comprehensive investigation, presented a plan for a state-wide power system predicated on the complete development of hydroelectric capacity in the International Section of the St. Lawrence River, at Niagara Falls and at lesser sites in the state, a high voltage transmission system, and the full co-ordination of hydro and steam power into one operating system. It was contemplated that the state, through the Power Authority, would assume responsibility for the construction of the hydro facilities and the transmission system, and that private utilities, cities, and co-operatives would participate in the pool both as suppliers and distributors.[8]

In 1935 the Federal Power Commission brought fifteen years of criticism to a focus in its *National Power Survey*. It analyzed the surplus and deficit areas of the United States and showed how the failure of private utilities to integrate their facilities, both intra- and interregionally, created and perpetuated the surplus-deficit problem and rendered the concept of a "national power supply" meaningless and unrealistic. In the Commission's own words:

> Up to the present time there has been no official consideration of the possibilities of interconnection and coordination in relation to the national power supply. . . . The vital importance of further studies of interconnection and coordination from both an engineering and economic standpoint is clearly revealed in Sections III and IV of this report in which the adequacy of present power facilities and the surpluses and deficits of dependable capacity have been discussed. There it has been shown that critical shortages of power will exist in many districts when normal industrial activity is resumed. . . . In view of this contingency it is of the highest public interest that thorough studies should be made of the possibilities of meeting this shortage in part by improving the interconnection and coordination of existing power facilities. . . . Interconnection as it exists today in the United States is not the result of any definitely planned program. Its growth has been relatively haphazard, handicapped by intercompany rivalry and prejudices and by artificial barriers, such as State lines, prohibitory laws and a lack of uniformity in tax laws in adjoining communities. There are, of course, a number of well-defined areas in which interconnection is relatively far advanced, . . . but it would appear that in none of these regions are all of the benefits possible from a high degree of interconnection and coordination being secured. . . . Savings of millions of dollars a year could be effected through suitable interconnection and coordination of the Nation's power facilities. (*National Power Survey*, Interim Report, Power Series No. 1, 1935, pages 53-55.)

---

[8] *Fourth Annual Report* for the year ending December 31, 1934. Published as Legislative Document No. 102 (1935). See particularly Section III, pp. 33-50, and Appendix 3, pp. 72-76.

Two private investigators, writing after 1935 but commenting on the irrational consolidation movement of the twenties and early thirties, observed:

> The consolidations were not planned from the standpoint of reasonable public requirements. Their object was not maximum attainable efficiency, minimum cost of coordinated service, greatest realizable public good. There was no such ideal. No comprehensive survey was ever made of territories that could be economically brought together into a single operating unit. Disregard of public interest produced not only financial distortions, which we have recounted, but also discordant combinations of properties, overlapping facilities, and extensive duplications. (John Bauer and Nathaniel Gold, *The Electric Power Industry*, Harper & Brothers, 1939, page 167.)

This "discordant property integration," or "misintegration," led to grave deficiencies in power supply and imposed on the public excessive and unnecessary costs:

> Practically nowhere in the country has there been such consolidation of generating and transmission properties as to provide for systematic integration of resources within a state or other integrated region, at minimum cost to the public. With few exceptions, properties have been combined and constructed without regard to state or regional requirements. There has been not only uneconomical location and proportionality of generating stations, with consequent waste and duplications, but there have been particularly excessive, badly located, duplicating, overlapping, and overcostly transmission lines. They were mostly planned and directed not in the interest of the state as a whole, but for system advantages, according to the dictates of absentee control. The net result is poor economy, unnecessarily high cost of generation, haphazard interconnections, and wasteful transmission. And in most states there are extensive sections without adequate connections and with unjustifiably high cost of power. (*Idem*, page 171.)

Thus matters stood in 1935 when the issue came before the Congress. If ever the time was propitious for a basic reorganization of the industry, this was it. Some of those who participated in the drafting of the original bills—S. 1725 and H.R. 5423 (74th Cong., 1st sess., 1935)—were cognizant of this opportunity and sought to incorporate provisions designed to secure the co-ordination and integration of power facilities. Section 11—the famous death sentence—specified as the ultimate ideal "geographically and economically integrated" public utility systems. Section 30 instructed the Federal Power Commission to conduct integration studies and to make recommendations "as to the type and size of geographically and economically integrated public-utility company," the obvious purpose being to provide a basis for the organization of integrated systems. Section 213 affirmed the purpose "of coordinating facilities for the interstate transmission of electric energy into integrated systems." Section 202 of Title II imposed on every public utility company the duty "to furnish energy to, exchange energy with, and transmit energy for any person upon reasonable request." Section 203 (a) empowered the Federal Power Commission to establish regional districts "for the control of the production and transmission of electric energy, including interchange of energy, interconnection of facilities, and determination of the uses to be made of the facilities." Such co-ordination would be voluntary "as far as practicable," but Section 203 (b) provided that the Commission, after a hearing, could by order direct a public utility to make additions, extensions, repairs, or improvements, to establish physical connections with others, and to permit use of its facilities by others.

The testimony before the Senate and House committees by spokesmen for the Federal Power Commission dispels any doubt that the intent of these sections was to promote integration. Commissioner Clyde L. Seavey, referring to Section 203 of Title II, testified:

> This section furnishes the basis on which integrated regional systems of power generation and transmission may be built. The Commission can compel connections to be made that will secure an adequate supply of electric energy in all sections of the country at the lowest possible cost. It may direct the source from which current in each interconnected system should be taken at any particular time. It also affords a means of eliminating the evils that accompany rivalries and jealousies between systems in a field where competition has long been abandoned as a method of control. Present companies would gain strength and stability through the increased use of their facilities and the elimination of wasteful duplication of plant and service. (House Committee on Interstate and Foreign Commerce, 74th Cong., 1st sess., Hearings on H.R. 5423, Part I, p. 385, March 7, 1935.)

Commissioner Seavey made it clear that, in his judgment, the "voluntary" provision in Section 203 (a) did not weaken the power of the Commission; if voluntary action were not forthcoming the Commission, under Section 203 (b) could order interconnection. He also pointed out that the effect of Section 203 would be to impose on private power companies the obligation to operate their transmission lines as common carriers, although he expressed some doubt that this obligation would extend to the transmission of publicly-produced power. (*Idem*, page 395.)

Dozier A. De Vane, solicitor for the Federal Power Commission, testifying before the House Committee with respect to Title II and particularly as to Section 203, made it clear that the purpose was to effectuate the reorganization into integrated systems of properties divested from holding company control:

> . . . to our mind [i.e. FPC] the most beneficial provisions in Title II are designed to secure integrated operating systems as the proper outgrowth of whatever holding company regulation may be enacted. (*Idem*, page 517.)

In a memorandum analyzing the constitutionality of S. 1725, Oswald Ryan, general counsel of the Federal Power Commission, in association with Mr. De Vane, solicitor, justified the integration provisions of Title II as follows:

> That the uncontrolled and uncoordinated generation and transmission of electricity results in a duplication of facilities and uneconomical operation . . . are facts thoroughly established by governmental and private studies. The unanimity of opinion regarding the vast saving to be accomplished by the proper coordination of power facilities, and the need for a centralized control of the coordination process furnishes a formidable basis for the exercise of congressional power provided in Title II of the present bill.[9]

---

[9] Hearings before the Committee on Interstate Commerce, U. S. Senate, 74th Cong., 1st sess., on S. 1725, p. 800.

Thus both the language of the original bills and the testimony of responsible witnesses confirm the view that integration under federal planning and direction was contemplated. But at this critical juncture the Congress fumbled the ball and lost the game. Taking a limited view of its responsibilities and of its constitutional powers, disregarding the constructive criticism of the preceding fifteen years, ignoring the almost unanimous counsel of informed experts, and yielding to the importunities and pressure of private power interests, the Congress passed minimal legislation designed to effect a partial abolition of holding companies and to establish limited federal control over interstate operations. The approach was negative; the objectives limited; the technique restrictive. The federal government would merely restrain the most egregious private abuses and correct the most flagrant departures from rational principles of organization. Beyond this Congress would not venture; the concept of an integrated power system, planned and directed by federal authority on a regional or national basis, was discarded in favor of fatuous reliance on private monopoly as an instrument of public policy. The Act of 1935, as it finally emerged in mutilated form, made certain genuflections toward integration, but this was largely pretense devoid of all substance and reality. Some of the general language was retained but all the teeth were extracted. Neither the SEC nor the FPC was given power to compel the integration of properties; without such power the progress of integration would be dependent on the strategic interest of private monopolists.[10]

Critics were quick to point out the deficiencies of the Act of 1935. Writing in 1939, Bauer and Gold predicted its impending failure to achieve integration:

> Whether it [the Act of 1935] will bring about fundamental readjustment in the present electric systems is a matter of considerable doubt, depending upon the Commission, the companies and the courts. Important changes will doubtless be effected, but the basic evils of organization and management may largely remain, because of system opposition, lack of clear legal powers, and obstacles of administration.[11]

In a more exhaustive analysis, Dr. Gordon C. Losee reached the conclusion that neither the SEC nor the FPC had power to regroup properties divested under Section 11 into compact regional systems.[12] Congress had simply not given the SEC or the FPC adequate powers to compel the integration of private utility properties; they could not require one company to sell nor another to buy; they could not require the construction of transmission lines or the pooling of facilities; no provision was made for the unification of industrial, private utility, and public power. Dr. Losee predicted that the Act might succeed modestly in effecting financial simplification but that it would almost certainly fail to achieve physical integration.

---

[10] For an excellent summary, section by section, of the modification of the original bills —S. 1725 and H.R. 5423—see Hearings before a Subcommittee of the Committee on Interstate and Foreign Commerce, House of Representatives, 80th Cong., 1st sess., on H.R. 2972 and H.R. 2973 (1947), at p. 300.

[11] *The Electric Power Industry*, p. 267. In a footnote at the bottom of this same page they foreshadow Bauer and Costello's 1949 book—*Public Organization of Electric Power*—by saying that, if the Act of 1935 fails, "the ultimate recourse really must be public ownership and operation."

[12] "The Reorganization of the Electric Power Industry into Regional Systems" (doctoral dissertation, University of Illinois, 1940).

Fifteen years have elapsed since the passage of the Act of 1935. What has been the record of accomplishment? Has this record confirmed these early predictions of failure?

Prior to World War II private utilities made no substantial progress toward integration despite the urgent prodding of the Federal Power Commission. In 1941 and 1942 the Commission invoked its powers of compulsion to order emergency interconnections. Forty-five such orders were issued—twenty-six involving interconnections among private utilities, and nineteen interconnections between private utility and public or industrial plants. By this means large blocs of power capacity, which otherwise would have remained idle, were mobilized for war production. After the cessation of hostilities most of these emergency interconnections were abandoned in order to escape federal jurisdiction; as of 1947, only seven "permanent interconnections for emergency use" remained in effect.[18]

In 1944, the Twentieth Century Fund (*The Power Industry and the Public Interest*) after surveying the situation recorded the following judgments:

> The Federal Power Commission has never divided the country into regions for the voluntary coordination of facilities. (Page 200.)
>
> Maximum economies in generation and transmission have not been realized. (Page 201.)
>
> The law does not give the SEC adequate power to rearrange the market areas of private utilities. The SEC can decide what parts of a system should be pruned off but it cannot fully control the disposal of the rejected parts. (Page 97.)
>
> A good system should be predicated on the "most complete interconnection and interrelation which it is practicable to bring about." (Page 246.)
>
> Up to the present, the terms of interchange agreements, which in the main are devoted very largely to the utilization of surplus power, have been left to private bargaining. (Page 247.)

The report points out that by including generation, transmission, and distribution in its definition of an integrated system, Congress made it impossible to separate these functions (page 97). The suggestion is advanced that production and transmission should be organized regionally, while distribution should be organized on a local basis (page 245). Despite these admitted defects in the law and the conceded failure of the Act to achieve integration, the report refrains from recommending governmental compulsion.[14]

---

[18] Federal Power Act. Hearings before a Subcommittee of the Committee on Interstate and Foreign Commerce, House of Representatives, 80th Cong., 1st sess., on H.R. 2972 and H.R. 2973 (1947), pp. 718-720.

Bauer and Costello, in their 1949 study (*Public Organization of Electric Power,* Harper and Brothers), go much farther. They affirm categorically that the intent of the Act was "to bring about efficient territorial grouping out of the welter of disconnected system properties that were scattered over distant parts of the country." (Page 59.) Quoting Section 30, they interpret it as follows:

> Its [the SEC's] responsibilities thus embraced not only dismemberment of existing systems in conformity with Section 11 objectives, but also reassembly into newly integrated areas, each combination brought together regardless of previous system controls or affiliations. Its duties were not just destructive of the old nonintegrated systems, but constructive to assemble the broken-up parts into new areas of integration, each in conformity with over-all public advantage. (Page 61.)

One may cavil at this interpretation of intent,[15] but their criticism of accomplishments under the Act is sound:

> The reassemblies obviously contemplated under Section 30 have largely failed to materialize. . . . The constructive goals presented under Section 30 have largely gone by default. . . . Section 30 has been virtually a nullity in its effect on integration. . . . [This failure] has been due to the direct and indirect resistance on the part of the holding-company groups. . . . Section 30 presented the general goal or duty, but it failed to convey to SEC the powers essential to attainment. After making its investigations, findings, and recommendations as to desirable new systems of integration, it has not had the power to issue the requisite orders to bring about the assemblies. It could recommend, but not order. . . . [The] SEC cannot require any system or company to take over properties or companies from other systems, and it cannot fix conditions of such transfers. (Pages 61–63.)

Bauer and Costello point out that the negative power of the SEC to refuse approval of private proposals for integration of facilities has not operated to achieve positive results. It can prevent unsound private schemes from being consummated, but it cannot assure comprehensive integration in the public interest.[16] It is their considered judgment that the Act of 1935 has failed and that comprehensive integration can be attained only through public ownership:

---

[14] P. 246. See dissenting footnote by James C. Bonbright in which he suggests the desirability of "compulsory consolidation into systems found to be economical by the administrative commission."

[15] Such intent was apparent in the original bills and was strongly defended by the representatives of the Federal Power Commission, as described above. But Congress eliminated all positive integration provisions, while retaining some of the general language. The ultimate intent of Congress should be judged by the final result, not by certain residual language or by the original draft, which was rejected.

[16] P. 63. An opposite interpretation is given by Professor E. W. Clemens in his *Economics and Public Utilities* (Appleton-Century-Crofts, 1950). At p. 531, he says: "Section 11 (b) represents one of the most ambitious attempts at economic planning in the history of American capitalism. Dr. Losee has criticized both the simplification and disintegration provisions as not going far enough. Whether the Commission has positive plans or not, the same effect has been achieved by placing the burden on utility management to work out its own plans for reintegration, subject only to the Commission's veto power. This represents a more rational approach to the problem than one of positive planning, by which systems are integrated by brute force according to the more or less fallible ideas of human administrators." The record of accomplishment since 1935 scarcely supports the position of Professor Clemens. Rather, it confirms the view of Dr. Losee in 1940, Professor Bonbright in 1944, and that of Bauer and Costello in 1949.

> For generation and transmission there will be little, if any, improvement. Each operating company will retain its own production and transmission plant, without over-all regional and interregional readjustments as would be advantageous; the potential efficiencies and economies of planned integration will not be realized. (Page 68.)
>
> Adequate integration will not be brought about under Section 11 of the Act. The task of assembling the country's electric properties into coherent operating systems for attainment of maximum efficiencies and economies remains largely untouched. Unless generation and transmission are organized on a comprehensive regional and interregional basis, available efficiency of power production under modern technology is extensively lost. (Page 76.)
>
> Comprehensive integration can hardly be forced through the means of private instrumentalities, despite federal and state efforts. It can be attained only through public displacement of the private systems. . . . Efficient planning in accordance with public needs is practically unavailable within the private systems, even as reconstituted. Each operating or holding company will mainly plan for itself, and will have little or no regard for the larger advantages of the locality or the state. While regulation can impose some planning features, its efforts will be resisted and will not be very successful. (Pages 76-77.)

It is generally conceded that under the Act of 1935 substantial progress has been made on the financial front; irrational holding company systems have been broken up, unrelated enterprises have been divested, superfluous holding companies have been eliminated, financial structures of operating companies have been strengthened, and the abuses which characterized the decade of the twenties have been largely prevented. But even those who are most enthusiastic over its financial accomplishments recognize that the Act has contributed little to the comprehensive integration of the electric power industry.[17]

That the electric power industry today is far from adequately integrated is attested by the recent reports of the National Security Resources Board.[18] In evaluating the guarded and restrained criticisms of this Board one should observe that they come from men known to be friendly to private utility interests; that they are made nearly thirty years after the principles of integration were first formulated in this country, fifteen years after the Act of 1935, and ten years after World War II revealed serious deficiencies in our national power supply.

---

[17] For example, Vernon A. Mund, in his recent *Government and Business* (Harper and Brothers, 1950), at p. 410, says the SEC has made "notable progress" in simplifying financial structures, but he does not even mention the integration problem. E. W. Clemens, in his *Economics and Public Utilities* (Appleton-Century-Crofts, 1950), at p. 506, describes the Act of 1935 as "a thorough-going piece of financial regulation," but concedes that integration is dependent on private, voluntary action. John Bauer, in his latest book, *Transforming Public Utility Regulation* (Harper and Brothers, 1950), at p. 305, admits that financial simplification has resulted in "far-reaching public benefits," but denies that any substantial progress has been, or can be, made toward comprehensive integration. The SEC, in a recent statement before the Celler Committee (*Study of Monopoly Power*, Hearings before the Subcommittee on Study of Monopoly Power of the Committee on the Judiciary, House of Representatives, 81st Cong., 1st sess., 1949, Serial No. 14, Part 2B, pp. 1460-1469) emphasizes its success in achieving financial simplification, but admits that it depends entirely on private initiative for the formulation and execution of plans for physical integration. The SEC, at p. 1463, says the latter practice "has proved highly satisfactory in practice," but it supplies no evidence whatever in support of this statement. It seems perfectly clear from this Report that the SEC views its mandate as one of "financial simplification" rather than "physical integration."

[18] *Capacity and Requirements of Electric Power Systems*, May 25, 1948; *Second National Electric Power Survey*, December, 1948; *Third National Electric Power Survey*, April, 1950.

In its first report (May 25, 1948), the Board, although admitting that the power situation is critical in certain areas and tight practically everywhere, disavows any design to engage in planning for the industry, and affirms its intent to rely on planning by private companies (page 3). After excluding industrial power, which represents approximately 20 per cent of the total, on the ground that such facilities are nonintegrated with utility systems (page 1), the Board concludes that for lack of adequate interconnection "there may be shortages within sub-areas of a region even though the region as a whole has an adequate power supply, and conversely there may be surpluses in sub-areas of a region in which an adequate margin is indicated." (Page 2.) The subsequent analysis of the eight power regions reveals serious deficiencies in seven of them, Region VIII being the only one in which power facilities are adequately interconnected. The Board notes the lack of integration within power regions and also between adjacent regions. Although it refrains from saying so explicitly, the implication is clear that we have no national or even regional power supply system in any realistic, functional sense.

The second report (December, 1948) indicates no substantial improvement. The Board again excludes industrial power, except that the Ford Motor Company is included in Region II. The same criticisms that appear in the first report are repeated. The region-by-region analysis reveals the same pattern: lack of integration both between and within power regions. Again, Region VIII is the only one in which integration is regarded as reasonably adequate. The Board concludes, in a masterpiece of understatement, that "power resources are not completely interchangeable between regions." (Page 2.)

The third report (April, 1950) indicates some improvement in Region IV (the Iowa-Missouri-Kansas pool) and in Region VII (the Bonneville Power Administration area), but in general the situation is unchanged. Surplus and deficit areas still exist in close proximity and subareas within regions are still isolated. Some 12,800,000 kilowatts of industrial power capacity remain nonintegrated (page 6). The Board is obviously concerned over the situation and warns against misinterpretation of national capacity totals as follows:

> In considering national totals, it should be borne in mind that, although substantial margins may be shown on an over-all national basis, there may be shortages or inadequate margins in certain regions or in sub-areas of a given region. This is due to the fact that, because of transmission limitations, power supply is not at present completely interchangeable between all regions or within all regions. Therefore, surplus capabilities available in some regions cannot be fully utilized to meet requirements in other regions or subareas where capabilities may not be adequate. (Page 11.)

Thirty years' experience demonstrates that under present institutional arrangements neither considerations of economic efficiency, public welfare, or national security will suffice to insure complete integration. The three sectors of the industry—industrial power, representing 20 per cent of the total, private utilities, representing 60 per cent, and public undertakings, representing 20 per cent—differ so fundamentally in outlook and motivation that it is impossible to unify them by voluntary action alone. If the potential advantages of integration are to be secured, positive governmental action on a national scale will be required.

Prospective circumstances render this conclusion more compelling than ever. Integration is an essential condition for: (1) the full development of a hydroelectric power by public authority as an integral feature of multiple-purpose river basin planning; (2) the conservation and scientific utilization of mineral fuels; (3) the full exploitation of improved techniques and of new energy resources; (4) the provision of an adequate supply of low-cost power to meet rapidly increasing demands; (5) maximum efficiency in the utilization of capital and labor for power production; (6) the strengthening of the industrial base for national defense.

In the perilous years ahead a nonintegrated electric power industry is a luxury which the nation can scarcely afford.

HOW EFFECTIVE IS STATE COMMISSION REGULATION?

By C. Woody Thompson
State University of Iowa

Note: Speaking in his role as a teacher of public utility economics, Professor Thompson presented in preliminary form the findings of a comparative electric rate study. In this study average bills for 100, 250, and 500 kilowatts of consumption of electricity in Iowa were compared with those charged in the surrounding states. All comparisons were made between like population groups. With but one exception, every comparison showed that cities and towns in Iowa paid higher average bills than were paid in any of the surrounding states and higher than the corresponding five-state average bills. The lowest bills were generally found in Wisconsin and Missouri, states with public service commissions.

DISCUSSION

David G. Tyndall: As I understand it, Professor Gray raises and seeks answers to three questions. First, is there adequate physical integration of the American power industry? Having answered this in the negative, he asks, "Why not?" Here the answer is that integration did not come about voluntarily despite the Public Utility Holding Company Act because of unwillingness of many companies to make themselves subject to federal regulatory jurisdiction and because of intercompany rivalries, while the Federal Power Commission and the Securities and Exchange Commission were not given sufficient power to bring it about by coercion. Thus we are brought to the third question, "What is to be done?" The suggested solution is to give the necessary coercive power to the FPC or to substitute public for private power.

I think no one will assert that the physical integration of the American power industry has reached the ultimate in perfection or that continued progress toward that ever moving goal is undesirable. But there is some evidence which would indicate that things are not as bad as Professor Gray would have us believe and that great progress has been made toward that goal in the last fifteen years.

For his statement that there are major inadequacies in the present structure of our power system, Professor Gray seems able to find only one enthusiastic supporter, that redoubtable exponent of public power, Dr. John Bauer. Both the Twentieth Century Fund study and the National Security Resources Board report seem only mildly concerned. On the other hand, Gray himself cites statements by both the SEC and FPC and by other authorities in the field that the process of integration since 1935 has been reasonably satisfactory.

To this evidence I should like to add a statement by Leland Olds, made in 1947 when he was a member of the FPC: "Broadly speaking, the transmission interconnections now operating include these economically and technically justified by load densities and in the *few* instances where utilities are exercising their constitutional right to avoid Federal jurisdiction, the interconnections are in place and can be placed in operation without delay should an emergency require."[1]

We all agree that efforts should be made to bring about permanent interconnections in these few instances by removing the inconsistencies between state and federal regulatory standards or by limiting the power of the FPC to the extent that there is unnecessary overlapping of jurisdiction; but if this is all that is at stake, it does not appear to merit Professor Gray's drastic prescriptions.

I am sure that Professor Gray will reply that much more is at stake—that the FPC has been so busy with the trees of interconnection that they have lost sight altogether of the forest of integration. Integration, we are told, means the creation of a single regional pool of power to which many contribute and from which all may draw. The existence of certain advantages in an integrated regional power system has been elaborated quite adequately by Professor Gray; I assume that no one would deny them. But surely it is the responsibility of the economist to consider costs as well as advantages. Professor Gray may have given careful consideration to these costs, but there is no sign of it in his paper.

It should be emphasized that integration need not be an all-or-nothing affair. Its advantages under certain conditions may be very great and may clearly outweigh the additional costs which they necessitate; but this need not always be the case. Each proposed integration scheme must be studied on its own merits. In such calculations it is important not to overlook one very important category of costs; namely, administrative costs. Experience in at least one of the areas where integration has been carried relatively far—the Pacific Northwest—has shown the existence of significant costs of this type. It may be argued that these administrative costs are largely a function of the existence of private power; but if public power is to be operated rationally under the price system, it will be just as necessary to compute the cost of power to the several consumers and to keep accurate record of the interchange of power between the various units of the public power system, though these costs may be less than under the present mixed system.

In conclusion, I would suggest that Professor Gray's paper overlooks the very real connection between the nature of the financial structure and the physical efficiency of the economic system. Prior to 1935, many of the best brains in the private power industry were focused on profits to be derived from financial manipulation and on the construction of holding companies whose principal purpose was the concentration of financial power in the hands of a privileged few, the deception of the investing public, the siphoning off of profits via service companies, etc. With the simplification of the financial structures there is some reason to hope that attention will be focused instead on taking maximum advantage of advances in technology and those measures of integration which will result in lower cost. We might then expect that private power could, without pressure from above, achieve the degree of integration which is most desirable from the standpoint of the whole community. This may be too much to hope for. There is some evidence that certain private power interests have transferred all the time and energy formerly expended on financial manipulation to fighting for higher rates and lobbying in Washington; but there is also a brighter side to the picture. The Northwest Power Pool originated with six private power companies, and it is of interest that the chief of the FPC's transmission section was prepared to assert that in this matter of interconnection "the utilities have done a grand job"[3] and that the lack of regional transmission lines in a few areas was due to excessive cost.

---

[1] *Hearings* before a Subcommittee of the Committee on Interstate and Foreign Commerce, House of Representatives, 80th Cong., 1st sess., on H.R. 2972 and H.R. 2973 (1947), p. 479.

There may still be need for giving regulatory agencies more power to achieve integration in those instances where integration is clearly beneficial and would not be introduced without the pressure of regulation, but the solution is less simple than Professor Gray indicates.

The case for financial simplification was clear on many grounds, and the results in the last fifteen years have amply justified its proponents; forced integration was and is a much more debatable question. In 1935, a wait-and-see attitude on this point was not unwarranted and it may still be too early to judge the results of that decision. It is incumbent on us to weigh carefully the effects of imposing regulation backed up by sanctions even though they may do a quicker job, for it is important in the interests of effective regulation that the over-all regulatory burden should be minimized and that, wherever possible, the automatic forces of the market should be used rather than the all-too-lively hand of federal regulation. Whether there is public or private ownership in the power field, we must beware of taking all initiative from the managers of that industry. We can only hope for an efficient industry if management has a reasonably wide range of action in which to operate, subject, if need be, to the veto power of a regulatory agency.

ERWIN E. NEMMERS: In discussing Professor Thompson's paper I ought, in fairness, to indicate possible bias on my part. In the past I have served as special attorney on rates for what is called by some "the world's greatest corporation" and by others "an enveloping octopus." I refer, of course, to the Bell System. In addition, I have served for a number of years as general counsel for the country's fourth largest manufacturer of rural transformers. This certainly has been a vantage point from which to examine the intricacies of electrical engineering in the distribution field.

I would like to digress for a moment to indicate a venture which likewise may color my remarks. At Marquette we have established a Public Utilities Institute, directed primarily to college graduates currently in the employ of utilities and preparing for management assignments. Before this Institute appear the members and department heads of the Wisconsin Public Service Commission as well as the leading experts of the utilities.

---

[3] *Ibid.*, p. 655.

My first point is that Professor Thompson's first conclusion—that Iowa's electric rates are the highest of the group and Wisconsin's the lowest—is certainly established. But the second conclusion—that this is due to the absence or presence, respectively, of a public service commission—I doubt. A variation of 5 to 16 per cent as regards rates of privately-owned companies in Iowa by comparison with her neighboring states has many more ready explanations. Nebraska and Iowa are excluded from the average, leaving Missouri, Wisconsin, Illinois, and Minnesota for comparison. Three of these four states are properly classified as industrial states. Iowa certainly is not an industrial state. As Professor Thompson points out, the questions of load factor and off-peak industrial and commercial consumption have a very definite bearing, particularly where such service is not priced on a marginal cost basis but priced much more on the value of service or competitive cost principle. Professor Thompson can with no more validity state that unless proven otherwise the commission explanation stands, than the utilities can say that these factors are decisive until the commission is proven to be the explanation.

My second point is this. I would like to see this same study made but excluding Wisconsin. Professor Thompson would immediately object that since the Wisconsin Commission is near the top in vigor and ability, this would be begging the question on my part. However, I would want Wisconsin excluded only from an electrical study because of a little known but very significant fact: the tremendous development of the Wisconsin River as a small, private TVA. This fact has much to do with the electric rates of smaller Wisconsin towns which constitute the population group of primary comparison.

A third point stems from practical experiences I have had. The condition of plant and its maintenance are seldom given extensive consideration in rate proceedings. In an industry where depreciation and maintenance charges are such a sizable portion of total costs, it is easy to see that, even on a *ceteris paribus* assumption, considerable cost differences can lie in this factor. Differences of the order of 15 per cent cannot be explained by this factor alone in most cases, it is true. However, based on real life experience, at least in Wisconsin, this factor is too often overlooked.

As a fourth suggestion, I question the cost approach. An interminable group of cost factors posing possible explanations for rate differences is to my thinking something of a red herring. Is not our real question whether the company is making excessive profits? Would not a study along profit lines be more relevant to the question of the efficacy of commission regulation? It is true that a study of naked profits is not apt to be very convincing in the case of most utilities—that the question of legitimacy of costs and efficiency of management is more productive of dollars and cents results to the consumer. But beware. Unless the more efficient management is allowed, as

Mr. Justice Brandeis advised, something extra by way of profits, regulation will not be effective. Ignoring this fundamental proposition is certain to lead to padding of rate increases; the utility will ask for a rate increase of more than the amount needed, for fear it may not later be able to get a fair allowance for its efforts.

Referring again to practical experience, it is easier from the legal viewpoint to hang onto an excessive rate than to get a legitimate rate increase where a commission is niggardly. Utilities must be convinced of flexibility upwards in rates before they undertake flexibility downwards.

In Wisconsin, municipally-owned electric plants are subject to Commission regulation. Professor Thompson's Table 2 shows that publicly-owned electric utilities in Wisconsin uniformly have lower rates for the 250 kilowatt-hour bill. The unweighted arithmetical mean average of percentages shows privately-owned electric rates 23 per cent higher than publicly-owned. Yet I should hesitate to say what this might be taken to prove. One thinks immediately of the different tax position of the two utilities as regards both property tax and income tax. In Wisconsin, the Commission has determined that it takes $2.12 of profit before taxes at the present time to yield $1.00 profit to stockholders, due solely to the effect of the income tax.

I have no quarrel with the literal statements made by Professor Thompson on the basis of the research, nor with the methods employed. After all, the claim made is "that the figures for the states having a public service commission are suggestive of what a vigilant commission in Iowa might have accomplished." My suggestions are rather that the influence of a number of factors which Professor Thompson recognizes ought to be developed further statistically before we draw a conclusion. I concede that isolation of the effect of the several factors is a difficult task. The only question is which of the many factors are the most significant in relation to this particular study.

THE HOUSING PROBLEM: I. THE CURRENT SITUATION

THE HOUSING INVENTORY: ANALYTIC CONCEPT AND QUANTITATIVE CHANGE

By LEO GREBLER
Columbia University

In the selection of subjects for the housing sessions at this meeting there is a clear recognition of the fact that housing has become a political issue of the first order. There may be a great deal of argument whether this is good or bad for either housing or politics. I entertain the hope that it will at least be good for housing economics or for a better understanding of market processes and situations in housing.

The direction and intensity of economic analysis have often been influenced by political problems. It is very questionable, for example, whether economists would have concentrated as much as they did on the theory of international trade or on monopolistic output and price behavior if tariffs and control of monopolies had not been burning political issues. The interest of professional economists in housing has long suffered from the absence of such an external stimulus.

A more intensive interest of economists in housing would not only improve our understanding of the operation of the housing market but might also be fruitful for economic theory, for economic theory has been concerned principally with the analysis of flows—flows of goods, services, money, and so forth. In the case of housing, there is a real question whether the economics of flows needs to be modified by greater emphasis on the economics of stocks. However, the economics of standing stocks or of durable goods characterized by a high degree of physical immobility is as yet poorly developed.

Aggregative economics has made increasing use of analyses involving the concept of stocks rather than flows. Thus modern economic theory assigns importance to the stock of fixed capital; some analysts have attempted to recast economic analysis in terms of a general theory of exchange in assets; in the monetary field, the role of liquid balances —an inventory concept—has been increasingly recognized. But outside of aggregative economics, tools of analysis have been fashioned primarily to deal with markets in which goods flow rapidly from production to consumption (extinction) or with commodities with short consumption periods. One of the notable exceptions is the automobile market where conventional demand-supply analysis has been modified to take stocks and the resale market into account.

Greater attention to housing as a problem in economic analysis may help in the development of theory or theories that fit durable goods markets more adequately than is now the case. The significance of such an enlargement of economic analysis is obvious in view of the importance of producers' and consumers' durable goods in a technologically advanced economy.

Most of the economists who have concerned themselves with the housing market have done so because of their interest in capital formation or investment. This motivation has greatly influenced the analytical apparatus used. Thus econometric and other models have been constructed by J. Tinbergen, J. B. D. Derksen, L. R. Klein, and H. B. Robinson, among others, primarily for the purpose of explaining and predicting the volume of new construction. To explain or predict new construction, certain market changes in the existing stock of housing, such as changes in vacancies or rents, have been introduced as variables, but they have been introduced usually as something given rather than as something to be explained. As a result, few if any efforts have been made to construct even rough models of the entire housing market.

I submit that a comprehensive theory of market behavior must take its starting point from the existing stock of housing and its utilization. The emphasis on the existing stock of houses is conditioned, in the first place, by the quantitative relationship between additions to stock and existing stock. The ratio of new housing to the existing stock is very low in the short run. This ratio ranges roughly from 0.5 to 4 per cent of existing dwelling units in any year and may average not more than 2 per cent per annum over long periods. These relationships hold for the aggregate of local housing markets and vary, of course, from community to community. For example, new housing units built from 1946 through 1949 in the Miami metropolitan area equalled about 60 per cent of the housing units standing in 1940; the corresponding ratio for the New York-Northeastern New Jersey metropolitan area was less than 10 per cent. Production of new housing has only a one-directional influence upon the quantity of the housing stock; i.e., it can add to the stock. Since the volume of demolitions in any year is negligible, even complete stoppage of construction does not reduce the stock of existing houses—in contrast to commodities with a shorter consumption period where reduction or stoppage of output would usually result in declining stocks. The number of nonfarm dwelling units lost through fire and other hazards and through demolitions is estimated at 40,000 to 50,000 a year. During the past half century, there was not a single year in which the number of nonfarm dwelling units standing was lower than in the preceding year, to judge from available data.

The emphasis on the existing stock is also conditioned by the nature of the cost-price-output relationships between the standing stock and new construction, of which more will be said later.

Accordingly, my paper falls into two parts: one attempts to illustrate the analytical usefulness of the concept of housing stock; the other presents an alfresco picture of major quantitative changes in the housing stock and its use during the past decade.

I

Introduction of the housing stock as an analytical concept requires first the removal of some verbal underbrush. The terms housing stock and housing inventory will be used interchangeably. They are defined as the total number of dwelling units standing at a given time. For more refined measurement we may wish to use floor-space area, number of rooms, and quality characteristics. But the dwelling unit is the unit traded in the market in which rights to the use of houses or parts thereof are exchanged through lease or purchase; i.e., the market for leaseholds and for fees to single-family and similar houses occupied by their owners. (This definition excludes the market for fees to apartment houses, which is not considered in this paper.) In the first approximation to a theory of housing market behavior, the use of undifferentiated dwelling units is permissible on the ground that there are broad economic forces which impinge upon dwelling units of different kinds and which affect price and quantity relationships in more or less parallel fashion. Refinements are unquestionably necessary. They will be more fruitful after a general and rough analytical framework has been established.

Second, the terms stock and inventory suggest numerous analogies with commodity inventories. Most of them are false. The housing inventory is not carry-over held purposefully by firms to link one production period with the next. The housing inventory is not held principally by firms. A substantial proportion of it, now about 55 per cent of all nonfarm dwelling units, is held by households for their own use. In contrast to inventories in most other markets, the housing inventory cannot be adjusted downward when sales diminish. Owners can close their buildings and withdraw them from the market for periods of time. This occurs in individual instances. However, the unlikelihood of wholesale withdrawals from the market is illustrated by the recent, unsuccessful efforts of local real estate boards to cause landlords to close their buildings in protest against continuance of rent control. Physical removal of housing occurs principally when there is a new, more profitable or a public use for specific sites; i.e., is usually caused by factors other than those that operate in the housing market.

These unique characteristics of the housing inventory must be kept in mind if false analogies are to be avoided. Finally, a word about the often stated imperfections of the housing market: unstandardized commodity, inadequate knowledge of buyers and sellers, fixity of location, and so forth. Without trying to minimize these, I suggest that housing economists have perhaps been too self-conscious about complexities and market imperfections in their own field and too bland in assuming simplicity and perfect markets in other fields. Fixation on imperfections has unduly hampered the development of a more rigorous theory of housing market behavior.

The following schematic presentation of behavior of a free housing market, based upon the concept of housing inventory, is sketchy and meant to be suggestive rather than definitive. It is a preliminary staff product of the Institute for Urban Land Use and Housing Studies at Columbia University (David Blank, Chester Rapkin, and Louis Winnick) and reflects work still in progress.

My illustration deals with the market for leaseholds in multifamily dwellings. This market is one of at least three submarkets that need to be considered separately because they differ in significant aspects. The other submarkets are the market for fees to single-family houses and the market for leaseholds in single-family houses. The market for leaseholds in dwellings with few units, such as two- to four-family dwellings, is important in many localities and may require separate attention. Market behavior will tend to share some of the characteristics of the market for leaseholds in multifamily dwellings and some of the characteristics of the market for leaseholds and fees in single-family dwellings. The submarkets may be conceived as relating to geographic housing market areas, however defined.

Two analytic periods are distinguished in our presentation. The first—the standing stock period—relates to price determination in a market in which no new construction of multifamily dwellings occurs. The maximum quantity of transactions is limited by the standing stock; i.e., the number of existing dwelling units. For analytic purposes, conversions of existing dwelling units may be considered akin to new construction or conversions may be taken to offset roughly demolitions. Prices and quantities in the standing stock period are determined by the interaction of the owners of existing stock and all tenants, both "sitting" and potential tenants, on the quite realistic assumption that the leases of sitting tenants come up for renegotiation in periodic and frequent intervals.

The second—or construction period—describes the process of price determination in a market in which new construction occurs. In this period, prices are determined by the interaction of owners of existing and builders of new stock on the one hand and by sitting and potential tenants on the other.

It is comparatively easy to view a demand curve for both analytic periods. The demand curve may be considered a function of multiple dwelling rents, income levels, tastes, family formation and composition, prices and rents of available substitutes, i.e., the single-family fee and leasehold markets, and possibly multiple dwelling rents relative to prices of other consumers goods such as food.

It is more difficult to view an independent supply curve in this market. In the standing stock period, there is no supply curve in the ordinary sense; i.e., one which indicates the variation of units offered to price. For the number of dwelling units a landlord or all landlords will offer is not simply related to rent but to total net revenue which, in turn, is dependent upon the level and shape of the demand curve. The reason for this phenomenon lies in the cost and revenue structure of the landlord as a firm and landlords as an industry. Strangely enough, no one to my knowledge has ever attempted to analyze landlords' operating cost and revenue curves. However, there are good reasons for postulating that (*a*) there are fixed costs[1] such as taxes and insurance even if a building is closed or withdrawn from the market; (*b*) a large proportion of total costs in operating buildings is composed of fixed costs; i.e., they do not vary significantly with rate of occupancy over wide ranges of utilization of a building; (*c*) the marginal cost of leasing an additional unit that was vacant is low relative to both the rental charged and to total cost; and (*d*) through rent cuts or concessions for new tenants, a landlord can practice price discrimination over short periods, but any open or hidden rent reductions calculated to reduce vacancies must in the moderately long run be applied to all tenants. Under these conditions, landlords will tend to set their rents so as to maximize the difference between total costs and total revenues. This maximum may be obtained without full occupancy if rent cuts for vacant units would be so great as to reduce actual or expected net revenue. Landlords must await changes in market conditions, i.e., a shift in the demand curve, before they can increase occupancy without reducing net revenue.

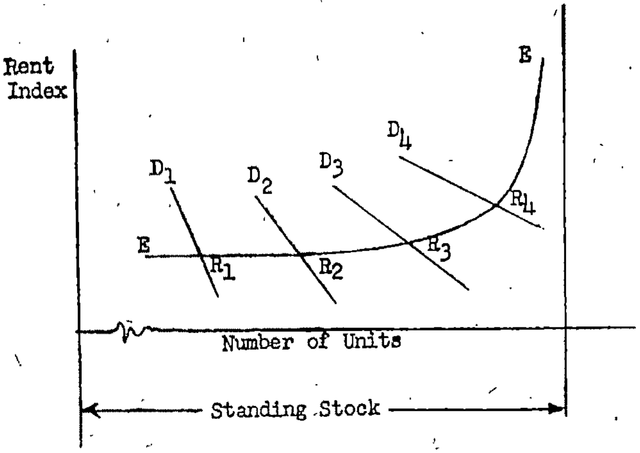
In lieu of an independent supply curve, however, there is a meaningful analytical tool in a curve which describes the path of adjustments of rent to utilization or occupancy within the existing stock of housing. Such a curve is shown in Diagram I which describes occupancy and rent at various levels of demand.

---

[1] The fixed character of certain costs is somewhat modified but is not changed in principle by the landlord's ability to postpone payment of real estate taxes and some repairs or similar items.

The x axis in this diagram is the number of dwelling units in the existing stock, the y axis is a rent index expressing rent changes for all types of dwelling units in the market for multiple-dwelling leaseholds. The *EE* curve shows the path of successive rent reactions to increases in demand that improve occupancy. The shape of the curve expresses the observation that landlords do not tend to raise rents in the first phase of increase in occupancy. During this phase, they are unable to gauge the extent and permanence of the demand shift and tend therefore to increase net revenue by improving occupancy rather than by raising rents. When occupancy reaches a high percentage, say 90 to 95 per cent, landlords feel assured of the demand shift and rents increase steeply as the utilization of the standing stock approaches its limit.

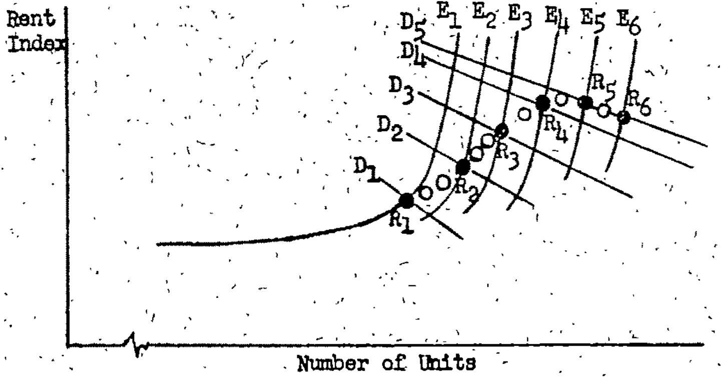
DIAGRAM I



As rents rise with greater occupancy, expectations of favorable rent-cost relationships lead to the building of new multiple dwellings; i.e., an increase in the standing stock. This is the new construction period. The path of rent adjustments to occupancy in the increasing stock is portrayed in the second diagram.

The increase in the standing stock is represented by shifts of the *EE* curve to the right. However, in the dynamic framework in which this presentation is couched, demand is also rising as new construction adds to the standing stock. Therefore, a continuous rise in rents during part of the new construction period (R_2, R_3, R_4) is consistent with both observation and theoretical considerations. How long demand will grow faster than the stock of dwelling units is, of course, a matter of empirical determination. As the rise in demand loses force and finally stops, rents cease rising (R_5) and eventually decrease (R_6). The long

Diagram II

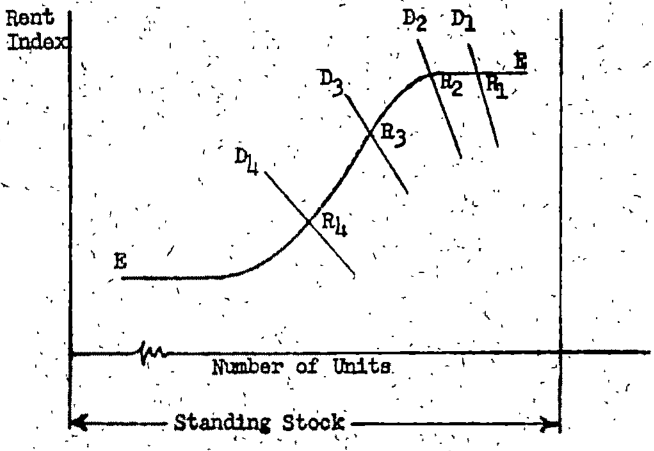


period required for initiating and completing new construction, plus inadequate market observation by entrepreneurs, is fairly sufficient explanation for the continuance of new construction during this initial period of falling rents. Also, rental housing construction motivated by long-term investment considerations and benefiting from lower site, materials, and labor costs may go forward in the face of increasing vacancies and falling rents.

A refinement to allow for quality differentials would be most important at this point. For new construction is concentrated in the higher-rental apartments, which alters the composition as well as the size of the standing stock.

The third diagram traces out a path of rent adjustments in response to declining occupancy, in a period again dominated by the standing stock.

Diagram III



Uncertainty of landlords about the extent and permanence of declining occupancy enters into rent setting, just as it influences rent setting during the first phase of increasing occupancy. The decline in the rate of utilization is widely held to be temporary and no resort is made at once to rent cutting. As demand shifts farther down, rent cuts must be made as decreases in utilization force new revenue-maximization adjustments. A lower limit to rent cuts is provided, however, by total operating costs, though total revenues may fall below total full costs for considerable periods of time. The floor to rents is found in total revenue that must at least equal the increment to total costs attributable to keeping the structure in operation. Hence the *EE* curve flattens out as utilization falls drastically. When rental revenues reach the critical level of operating costs, further decreases in utilization will no longer be associated with cuts in rent.

So much for the market for leaseholds in multiple dwellings. These propositions are drawn in such manner that they can be empirically tested, and empirical materials have, in fact, been used to give them realistic content. Similar analyses can be undertaken for the markets for fees and leaseholds in single-family and similar houses, and the interactions of these three principal submarkets can be expressed by cross-elasticities. On the demand side, single-family fees, single-family leaseholds, and multifamily leaseholds are substitutes for each other. On the supply side, owners of single-family houses have the alternative of offering units for sale or rent, but owners of multiple dwellings have no such alternative.[2]

I cannot deal here with these other markets and their interactions, or with the problem of introducing quality differentials between dwelling units. But it is perhaps not amiss to indicate that the most significant contribution of reformulated theory in terms of standing stock lies in the analysis of cost-price-output relationships.

On the upgrade, when the demand for housing services and the rate of utilization of the existing stock increase, prices are determined by the bidding for space units in the fixed stock. The bidding results in upward revaluation of the stock, which is magnified by expectations. Revaluation is facilitated by the fact that the housing stock is held in small units by numerous home owners and income-property owners, and that these small units are subject to frequent turnover. When revaluation reaches the point where prices of existing housing exceed production costs of comparable housing, new construction occurs. The excess of prices over production costs tends to be filled in, first[illegible] builders' profits and, in due course, by rising factor costs (1946-47).

---

[2] Disregarding the sale of existing apartments on a co-operative or similar [illegible] practice applies to only a small proportion of multiple dwellings in the higher r[illegible] and seems to flourish primarily in periods of rising or high incomes and limite[illegible] ers' choice.

On the downgrade, when the rate of utilization shrinks, prices are determined by bidding for buyers and the circumstances surrounding necessitous sellers. Here again bidding for buyers results in downward revaluation of the existing stock, which is magnified by expectations. Rental revenues of landlords tend to approach operating costs plus real estate tax and insurance, with no return on invested capital. Prices for the existing housing stock fall characteristically below the level of reproduction cost (1932-34). No new construction is undertaken, of course, without expectation that capital charges will be met. Under these circumstances, additions to stock are limited to special cases and to custom-built structures.

Thus it appears that under conditions of both increasing and decreasing rates of utilization of the housing inventory, prices of the housing stock are the most direct strategic factor in determining whether there are any additions to stock, as well as the quantities and prices of these additions.[3]

In this analytical framework, the initiation and expansion of new construction in periods of high and rising costs present no puzzle; and the failure of construction activity to respond to declines in construction costs is no anomaly. There is also an implication in respect to the widespread expectations that reductions in the first (production) cost of housing may "solve the housing problem." If, through technological progress, new houses could be injected at prices below those paid for existing houses, the resale market would tend to eliminate the difference in the process of revaluation, on the basis that like products command like prices.[4] A large sustained volume of lower-priced houses would be required to force an adjustment of resale values to the new, lower level of construction costs.

II

My second task—to portray recent changes in the housing inventory and its use—is made complicated by the fact that the complete results of the 1950 housing census are yet unknown, and I am naturally reluctant to produce estimates subject to repudiation by census data that will soon be forthcoming. However, sample census surveys of recent years give some rough indications of what the more complete census enumerations will show. My observations will be limited to nonfarm housing and to major segments, such as owner-occupied and tenant-occupied. They do not necessarily hold for individual communities. They will in some cases indicate only the direction of change without quantification—both to spare you the absorption of figures and to spare me embarrassment from the threatening census data. Briefly, the major changes in the housing inventory and its use have been as follows.

---

[3] Ernest M. Fisher, in his forthcoming *Urban Real Estate Markets and Their Financing Needs,* and Arthur F. Burns, in "Long Cycles in Residential Construction" (*Mitchell Essays*), come as close to an analysis along these lines as any writers.

[4] Ramsay Wood has called attention to this aspect of market behavior. Cf. "Housing Needs and the Housing Market," in *Housing, Social Security, and Public Works* (Postwar Economic Studies of the Federal Reserve Board, No. 6, June, 1946).

1. The nonfarm housing inventory increased from less than 30 million dwelling units in 1940 to about 39 million units in 1950, or by 9 million units. This is by far the greatest increase in number for any decade on record, in spite of the fact that the output of new housing was restricted by war regulations during about half the decade. The ratio of additions to existing stock, however, was lower for the decade as a whole than during the twenties. New permanent construction as reported by BLS accounted for about 6 million dwelling units, or two-thirds of the increase in the housing inventory. About one-third of the additions to stock was apparently made up of temporary housing, conversions, make-shift accommodations, new permanent units not reported in estimates of new building, and reclassification of farm to nonfarm housing.

In spite of the volume of publicly financed housing in the defense and war period, not more than approximately 10 per cent of the newly constructed units during the decade were publicly financed, inclusive of temporary housing.

2. The proportion of doubled-up normal families, i.e., of doubled-up married couples, increased sharply in the first few years after the war. This proportion, however, was lower in early 1950 than in 1940 and not larger than in 1930[5] when incomes were still high and housing vacancies ample. If the 1930 and 1940 ratios are any guide to more "normal" proportions of doubled-up married couples, we have within five postwar years practically eliminated the most obnoxious manifestation of what is generally referred to as the postwar "housing shortage." By the same token, undoubling can no longer be considered a prime source of future effective housing demand.

In addition to normal families that are doubled-up, there are "parent-child" groups living in other households. They comprise cases in which the other parent is deceased, divorced, or absent. In the majority of these cases, doubling-up is probably dictated by noneconomic reasons.

3. The past decade witnessed a shift from a comfortable vacancy reserve in 1940 to practically full utilization of the housing inventory in the immediate postwar years, at least in the urban centers and for habitable dwelling units suitable for year-round occupancy. There has unquestionably been some loosening-up compared to 1946 or 1947,

---

[5] *Population Reports* (Bureau of the Census, Series P-20, No. 31, September 27, 1950).

which will be reflected in the vacancy ratios shown by the 1950 Census. Vacancies have made their appearance in recently built rental projects, and houses are held vacant because of asking prices that demanders are not willing to pay. These were unheard-of phenomena only three years ago. I cannot predict the vacancy ratios which the census will reveal. I suspect the national gross vacancy ratio may be higher than in 1940 because of a vast increase of houses for seasonal occupancy, which the census lists as vacant. The net vacancy ratio, i.e., the proportion of vacant dwelling units for rent or sale, is likely to be much lower than in 1940.

The forces behind the decline in vacancies have often been described: the high rate of family formation, particularly among servicemen and veterans; internal migration; full employment during most of the decade; high incomes; large holdings of liquid assets by consumers; and rent control. I shall limit myself to a phenomenon related to the utilization of the housing inventory, and that is the intensity of occupancy, which is covered in the next two points.

4. The average number of persons per dwelling unit has declined since 1940. In 1947, according to a sample survey by the Bureau of the Census, the median number of persons per occupied dwelling unit in urban areas was 3.08 as against 3.16 in 1940; and in rural nonfarm areas, 3.16 as against 3.21 in 1940.[6] Likewise, the proportion of occupied dwelling units with more than 1.5 persons per room, which is generally taken to denote overcrowding, has been reduced, and the proportion of occupied units with less than one-half person per room has increased. Thus, during this past decade of tremendous pressure on housing space, there has in fact been some spreading-out of the population in terms of number of persons per dwelling unit and per room.

Superficially, it seems difficult to reconcile a generally less intensive use of housing space in 1947 with the increase in doubling-up of families from 1940 to 1947. The apparent paradox is explained by the high marriage rate in intervening years, which meant that a much larger proportion of persons in marriageable ages were married in 1947 than in 1940. The number of married people increased about 10 million from 1940 to 1947, while the number of single adults declined by 4,700,000.[7] rate of occupancy per dwelling unit in spite of more doubling-up. This may be exemplified by taking two families in separate dwelling units, one with two adult children and the other with one adult child. Assume that two of the adult children marry and move in with one set of parents and that the other child goes to college. Before the marriage there were seven persons in two dwelling units and no doubled-up family. After the marriage and departure of one child to college, there were only six persons in two dwelling units including one doubled-up family.

---

[6] "Housing," *Current Population Reports* (Bureau of the Census, Series P-70, No. 1).

[7] Statement by Mr. A. Ross Eckler, of the Bureau of the Census, before the Joint Committee on Housing, January 12, 1948.

The intensity of occupancy declined not only in tenant-occupied housing subject to rent control but also in owner-occupied housing. But it is impossible without detailed 1950 census data to look behind the medians and locate more precisely the segments of the housing inventory in which the spreading-out occurred. We do not know whether the decline of densities occurred principally in small or large units, expensive or inexpensive housing quarters, in big or small cities, or in areas of high or low vacancy ratios.

5. There has been some increase in the proportion of tenant-occupied dwelling units occupied by one and two persons other than married couples. According to the 1947 census sample survey, the proportion of tenant units occupied by one person increased from 9 per cent in 1940 to 10 per cent in 1947. The proportion of tenant units occupied by two persons, related or not related, rose from about 27 per cent in 1940 to about 30 per cent in 1947. During the same period, the proportion of owner-occupied houses with only one person declined. Since prices for such houses were uncontrolled while rents were frozen, the differential between tenant- and owner-occupied housing suggests some influence of rent control on the use of space. To judge from the sample census, however, the increase in the number and proportion of tenant units occupied by one or two persons has been smaller than some dramatized presentations of this phenomenon would suggest.

6. There has been considerable improvement in the quality of the housing inventory,[8] both as the result of the addition of new dwelling units and of repair, modernization, and replacement of equipment in existing units. The improvement occurred in tenant-occupied as well as owner-occupied housing, but seems to have been greater in owner-occupied housing. It appears that, on the whole, the effect of high incomes which tend to raise the quality of the existing stock has been greater than the effect of rent control which is alleged to foster poor maintenance and undoubtedly has done so in many cases. (In other cases, the possibility of obtaining upward adjustments of controlled rents has induced quality improvements.)

7. There has been a phenomenal increase in home ownership. The census of 1950 is likely to show that close to 20 million nonfarm families owned the houses they occupied as against 11,400,000 in 1940, and that over 50 per cent of all nonfarm families were home owners as against 41 per cent in 1940. For the first time in our history, as far as we know, the owner-occupied proportion of the nonfarm

---

[8] "Housing," *Current Population Reports* (Bureau of the Census, Series P-70, No. 1).

housing inventory actually exceeds the tenant-occupied proportion.

I need not describe in detail the factors which have produced the increase in home ownership during the past decade: high incomes, large liquid savings, liberal government-supported credit, and rent control, which caused the transfer of large numbers of existing tenant-occupied houses to owner-occupancy. In this recent growth of home ownership, compulsory elements have been heavily mixed with voluntary decisions. With increased incomes, large liquid assets in the hands of consumers, and the bulk of postwar construction in the form of sales housing, the proportion of home ownership would have risen sharply even in the absence of rent control.

It has become fashionable to belittle the distinction between home ownership and rental. We are told that the distinction has become blurred as a result of high-percentage debt financing and the slogan "monthly payments just like rent"; that the home owner today really does not carry the financial responsibilities and risks once ascribed to home ownership; and that a new type of tenure is evolving which may be called "playing janitor for the mortgagee." There is a modicum of truth in these observations, but they are perhaps unduly influenced by the financing of new transactions at any one time, by financing under government programs, and by maximum rather than actual terms. The Surveys of Consumer Finances indicate that 55 per cent of the owner-occupied nonfarm homes currently are free and clear of debt, about the same proportion as in 1940. Also, a fair share of current transactions, even before the recent credit restrictions, involved much more conservative debt financing than would be implied by the generous maximum terms under government programs. These facts should caution against hasty conclusions about revolutionary changes in the meaning of home ownership.

III

The changes in the housing inventory and its use in the United States under conditions of rent control have differed somewhat from those that might have been expected on a priori reasoning; and they have differed substantially from those in European countries after World War I, which have often been used as prototypes in predicting the likely effects of rent control on the use and production of housing in this country.

In spite of rent control, the construction resources available for enlarging our housing inventory have been virtually fully utilized since the end of the war. It is very questionable whether investment in housing could have been any larger in the absence of rent control, without creating even greater inflationary pressures on materials and manpower. It is equally questionable whether substantially more rental housing would have been produced in the absence of rent control. The first few years of the residential building boom after World War I, when rents were uncontrolled in most parts of the United States, were characterized by the same preponderance of sales housing that was observed from 1946 through 1950. In other words, factors other than rent control may explain the emphasis on sales housing during the first phase of a residential building boom.

The overwhelming proportion of new postwar housing was produced through private decisions and with private funds rather than through public action, although private decisions were influenced by federal mortgage insurance and guarantee schemes. Rent control did not prevent considerable population mobility, as is demonstrated by data from the census and the Consumer Finance Surveys. Nor has rent control interfered with a substantial improvement in the quality of the housing inventory.

In spite of some uneconomic use of space under rent control, we have corrected a serious doubling-up situation within five years, and today we have more dwelling units per 1,000 population—and probably a better balance between the number of dwelling units and the number of social families—than before the war. None of these things happened in any major belligerent European country after World War I in any comparable period of time, and in some not even up to World War II.

One of the reasons for these differences is, of course, the happy absense of physical war destruction in this country. Another reason may be the exemption from rent control of new construction—a practice not adopted by some of the European countries. More important, perhaps, is the fact that most European countries after World War I went through severe or even hyperinflation involving a decline in real income. Many of the phenomena attributed to rent control in these countries can be attributed to severe inflation or a combination of inflation and rent control.

Ours has rather been a case of mild, creeping inflation coupled with an increase in real income. The gulf between controlled rents and occupancy costs of new dwellings has not been as wide and difficult to bridge as in the case of many European countries after World War I.

Still another reason for the differences may be the propensity for home ownership in this country, particularly during periods of high and rising incomes. To sum up, the effects of rent control on the housing inventory and its use may differ substantially, depending upon the economic and institutional climate in which the control operates.

RENT CONTROL AND THE DISTRIBUTION OF INCOME

By D. Gale Johnson
University of Chicago

In mid-1950 it appeared that rent control in the United States was on its way to temporary oblivion. We were to avoid the silly nonsense of the French, who had retained rent control over more than three decades and permitted many tenants to obtain housing of a kind for 2 or 3 per cent of their income during recent years. The French were not alone in perpetuating inequities and inefficiencies on so vast a scale; other European countries, including England, had controlled rents since World War I. But France, Italy, and certain other countries had had such a strong shot of inflation that controlled rents had not the slightest relevance to existing realities. Among the more enlightening possibilities that can occur under rent control is the following statement of what could happen in England today: "If a house was last let in 1815, then the rent paid at the time of the Battle of Waterloo is the standard [ceiling] rent today."[1]

But it now appears that we may be faced with further rent controls, their exact nature and duration not yet certain. If true, it is certainly time that as economists and citizens we evaluate more carefully than we have the longer-run implications of rent control. If rent control is only a temporary phenomenon (is eight years temporary?) many of its inequities and imposed inefficiencies can be ignored, or so we have believed. But if it is to be with us for as long as two decades, we must consider its important implications in a more serious light. And if rent control is with us for two decades, can we ever rid ourselves of it? The vested interests of several million tenants will be so great, assuming continued inflation, that political pressures for it may be irresistible.

My assignment is to deal with the income effects of rent control. Some of the effects cannot be ascertained from available data and any of the effects can be ascertained only imperfectly. This paper started from a very simple proposition: If rent control has been effective in reducing rents, there has been a transfer of real income from landlords to tenants where rents have been controlled. This transfer has been an indiscriminate one, made without regard to the income position of individual tenants and landlords nor without much attention to the relative economic status of tenants and landlords as a group. It seems to be an acceptable assumption that most people—and especially those who advocate rent control—look with some favor upon the transfer of income from the relatively rich to the relatively poor and look with strong disfavor upon the transfer from the relatively poor to the relatively rich. The question which I have attempted to answer is this: Is there any important difference in the income position of tenants and landlords? (The term income position is a loose one, but useful refinement seems out of the question due to the data available to us.) In general, it is believed that if the median or mean incomes of the two groups are roughly the same and if the income distributions (as measured by Lorenz curves) are not very different, it can be said that the income positions are approximately the same.

---

[1] F. W. Paish, "The Economics of Rent Restriction," *Lloyds Bank Review*, April, 1950, p. 4.

Before turning to the above question there are certain other categories of income inequities that have grown out of rent control that should be noted. One relates to the relative changes in the asset and income positions of various categories of holders of real property. During the last decade holders of farm real estate have made substantial capital gains as have holders of nonresidential nonfarm properties. Owners of nonrented residential property have also been permitted to realize much greater capital gains than owners of rent controlled residential property. On the basis of equity, if housing rents were to be controlled, why not the prices of all residential property? A second relates to inequities among tenants. The less mobile elements of the renting population who have stayed in the same controlled units have fared very well indeed. New families and families disrupted by the war, both groups including many veterans, have suffered real hardships by being forced to double-up, to rent uncontrolled units at rents higher than would have otherwise existed, or to purchase housing at prices increased because of impacts of rent controls.

I. *Income of Tenant Families*

Tenants apparently have somewhat lower incomes than do homeowners. At least this appears to be true from inspection of income data comparing the mean or median incomes of the two groups. In 1945 owner families in urban areas had a median income of $3,338 and primary tenant families $2,782.[2] In 1946 the medians were $3,416 and $2,909.[3] These estimates exclude secondary families and individuals not in families. In 1946 individuals not in families constituted 30 per cent of the total number of tenant units, while individuals not in families were roughly 8 per cent of all owners. The median income of individuals not in families, due in general to their youth or relative old age, is much below that of primary families. In 1946 the median income of tenants who were individuals not in families was $1,310 and for owners in the same status the median was $830.[3] If all owners and all renter incomes are compared for 1945 in urban areas the medians were $3,165 and $2,476.

---

[2] Bureau of the Census, Series P-60, No. 2, Table 9. Owner families refer to families living in the dwelling they own and not to landlords alone.

[3] *Ibid.*, No. 3, Table 6.

Surveys covering 1947 and 1948 incomes of homeowners and tenant nonfarm families (defined to include single-member families) by the Federal Reserve Board indicate roughly the same differences.[4]

Available data indicate that tenant families tend to be younger than owner families. However, the relative youth of tenant families is offset by the high proportion of older families in the owner group. Rough calculations indicate that the age distributions of heads of tenant and owner families would generate about the same level of income. Thus it appears that median income of tenant families after adjustment for age differences has been about 15 per cent below that of owner families in recent years; or, put another way, about 8 per cent below the national median for all families.

However, our interest is in the relative income status of tenants and landlords. The United States does not have a landlord class—any important segment of its population dependent largely upon income from real property. Thus it is not possible to find any significant number of persons or families whose principal source of income is from real property. The income distribution of such a group would be pertinent in the present instance, but apparently it would include a rather small fraction of total rental income.

In what follows we have tried to determine one of two things: Is rental income divided among the various income groups in roughly the same way as total income? (2) Does rental income go to and do rent payments come from each of the income groups in roughly equal proportions? These two are not equivalent. Rent paid by tenants in the lower-income groups is generally a larger proportion of income received than is true in the higher-income groups. Estimates for 1948 indicate that nonfarm rent paying families with incomes less than $2,000 received 10 per cent of the total income received by all renters and paid 17 per cent of the rent. The families with incomes over $5,000 received 36 per cent of the income and paid 26 per cent of the rent.[5] Thus if the second proposition is supported by the evidence, it implies that rent receipts are relatively more important in low-income groups than in high. If the first were supported, it could imply that persons having rental income from housing had an income distribution similar to the economy as a whole. This implication is valid (if anyone receiving any rent is called a landlord) only if about equal proportions of the members of every income group are landlords.

---

[4] *Federal Reserve Bulletin*, Sept., 1949, p. 1040.

[5] *Federal Reserve Bulletin*, September, 1949, p. 1050.

II. *Incomes of Landlords*

We know relatively little about the owners of tenant-occupied nonfarm residential property. So far as I know, there is not even a reasonably accurate estimate of their number. An estimate from the 1950 Survey of Consumer Finances indicates that about 9 per cent of all families had income from rent other than roomers and boarders in 1949.[6] But some of these received all or part of their rent from nonresidential property. Yntema has estimated for 1944 that only a little more than half of the individual income from rents is from residential property, about a sixth from farms, and about a third from other, presumably commercial, property.[7] The same source indicates that about 77 per cent of all residential rents accrue to individuals. However, this proportion probably varies a great deal from area to area, with corporate holdings being a much larger proportion of the total in Manhattan or the North Shore than in Peoria.

In the data presented here it has not been possible to separate residential from nonresidential rents. Where the data refer to urban areas, it seems reasonable to assume that farm rents are unimportant. Of necessity it has been assumed that residential and nonresidential incomes are distributed in a similar way, though I would hazard the guess that nonresidential rents accrue in greater proportions to the higher-income groups than is the case of residential rents. Data on the distribution of spending units owning real estate other than homes for early 1949 seem to bear this out. Of the spending units owning such real estate about one-quarter in the $7,500-or-over income group owned commercial or rental property, while for all income groups only one-eighth held such property. However, there were no data on the proportion of this property that was rented.[8] In Tables 1 through 5 the sources indicated that rental incomes exclude income from roomers and boarders. The original source for Table 6 does not reveal how income from roomers and boarders was classified. In some cases, adjustments have been made to include an estimate of residential rent paid to corporations and received by individuals as dividends or interest. This has been distributed in the same way as interest and dividends were distributed by all corporations and as estimated in the particular study in question.

---

[6] *Ibid.*, August, 1950, p. 958.

[7] Dwight B. Yntema, "Rents in the United States, 1929-44," *Survey of Current Business*, March, 1946, p. 19.

[8] "1949 Survey of Consumer Finances," *Federal Reserve Bulletin*, October, 1949, p. 1190.

A national study of rural nonfarm families' incomes in 1941 indicates that 13 per cent of the families in the lowest money income group ($0-$499) had an average rental income of $115, while in the next lowest group ($500-$999) 15 per cent of the families had an average rental income of $200. In the lowest money income class, which contained 24 per cent of the sample, over 5 per cent of the money income was income from rent. This percentage was not exceeded except in the highest income group (over $3,000) which included 5 per cent of the sample. In this group less than 8 per cent of the money income was from rent. (See Table 1.)

TABLE 1

RENTAL INCOME BY INCOME CLASS, WITH PERCENTAGE OF FAMILIES WITH RENTAL INCOME, RENTAL INCOME PER FAMILY AND PERCENTAGE OF INCOME IN EACH INCOME CLASS FROM RENTAL INCOME, RURAL NONFARM FAMILIES, UNITED STATES, 1941

Money Income Class	Percentage Distribution of Families	Average Money Income	Percentage with Rental Income	Average Rental* Income	Income from Rent as Percentage of	
					Money Income	Total Income
0– 499	24	$ 291	13	$ 15	5.2	3.2
500– 999	24	740	15	30	4.1	3.1
1,000–1,499	22	1,238	13	32	2.6	2.2
1,500–1,999	12	1,703	15	44	2.6	2.3
2,000–2,999	12	2,363	16	35	1.5	1.3
3,000–4,999†	5	3,685	23	289	7.8	7.3
Total or Average	100	$1,311	15	$ 43	3.3	2.8

* Based on all families in income class.

† Includes a few families with incomes of $5,000 or over, not shown separately.

Source: *Rural Family Spending and Saving in Wartime* (USDA Misc. Pub. No. 520), Tables 4, 5.

The 1935-36 Consumer Purchases Study collected data on money income by sources. Some of the published data have been tabulated and brought together in Table 2. These data indicate that in the lowest-income groups rent income was a more important source of income than in the middle-income groups and usually more important than in the highest-income groups. In the North Central small cities no income group received a larger proportion of its income from rent than did the lowest-income group. The same was true of Pacific small cities. Among Chicago white families only the $1,000 to $1,249 income group received more proportionately from rent than the lowest two income groups. It should be noted that the mean income was $1,892. In New England small cities (not shown in the table) the lowest income group ($0-$249) included only 4 out of 1,000 families, none receiving any rental income, but rent was a more important source of income in the $250-$499 income group than in any other income group.[9]

In the plains and mountain small cities the general pattern in the other areas discussed was repeated. In the lowest-income range about 13 per cent of the income came from rent, while in the second lowest group ($250-$499) more than 7 per cent did. In the highest income group ($4,000 or over) slightly more than 6 per cent of the income was derived from rent. In the next to the highest group 3 per cent was so earned.[10]

TABLE 2

RENT INCOME AS A PER CENT OF MONEY AND TOTAL INCOME NORTH CENTRAL SMALL CITIES, PACIFIC SMALL CITIES AND CHICAGO, 1935–36

Income Class and City	Average* Net Rent	Average Rent as Per Cent of	
		Money Income	Total Income
North Central Small Cities†			
$ 0– 249	$ 21	15.7	11.9
250– 499	19	5.8	4.8
500– 749	14	2.4	2.2
750– 999	18	2.2	2.1
1,000–1,249	21	2.0	1.9
1,250–1,499	21	1.6	1.5
1,500–1,749	35	2.3	2.2
1,750–1,999	35	2.0	1.9
2,000–2,249	34	1.7	1.6
2,250–2,499	44	2.0	1.9
2,500–2,999	54	2.1	2.0
3,000–3,499	36	1.2	1.1
3,500–3,999	62	1.8	1.7
4,000 or over	266	5.2	4.9
All families	$ 35	2.4	2.2
Pacific Small Cities†			
$ 0– 249	$ 8	6.7	5.1
250– 499	11	3.4	2.8
500– 749	16	2.8	2.6
750– 999	28	3.4	3.2
1,000–1,249	7	.6	.6
1,250–1,499	13	1.0	1.0
1,500–1,749	17	1.1	1.1
1,750–1,999	28	1.6	1.5
2,000–2,249	30	1.5	1.4
2,250–2,499	32	1.4	1.4
2,500–2,999	41	1.6	1.5
3,000–3,499	41	1.4	1.3
3,500–3,999	48	1.4	1.3
4,000 or over	201	3.8	3.6
All families	$ 31	1.7	1.7

---

[9] Consumer Purchases Study, *Family Income and Expenditure, Middle Atlantic, North Central and New England Regions*, Part One, *Family Income*, "Urban and Village Series" (USDA Misc. Pub. No. 370), p. 362.

[10] Consumer Purchases Study, *Family Income and Expenditures, Plains and Mountain*

TABLE 2—(*continued*)

Money Income Class and City	Average* Net Rent	Average Rent as Per Cent of Income (Money)
Chicago†		
Under $ 250	$ 2	2.0
$ 250– 499	14	3.7
500– 799	10	1.6
750– 999	9	1.0
1,000–1,249	6	5.4
1,250–1,499	10	.7
1,500–1,749	11	.7
1,750–1,999	8	.4
2,000–2,249	12	.6
2,250–2,499	11	.5
2,500–2,999	22	.8
3,000–3,499	31	1.0
3,500–3,999	37	1.0
4,000–4,499	34	.8
4,500–4,999	66	1.4
5,000–7,499	55	1.0
7,500–9,999	73	.9
10,000 or over	121	.9
All families	$ 14	.8

* Based on all families, whether or not they received income from rent.
† White, nonrelief families that include a husband and wife, both native born.
Source: Consumer Purchase Study, *Family Income and Expenditures, Middle Atlantic and North Central and New England Region*. Part I, "Urban and Village Series" (USDA. Misc. Pub. No. 370), p. 248; *Family Incomes and Expenditures, Pacific Region*, Part I, "Urban and Village Series" (USDA, Misc. Pub. No. 339), p. 214, and *Family Income in Chicago, 1935–36*, Study of Consumer Purchases, "Urban Series" (BLS Bulletin No. 642), Vol. I, pp. 72 and 149.

As was the case of New England small cities, it is necessary to estimate average total incomes within each income class in the Southeast small cities as these data are not given in the source. For both whites and Negroes the situation seems to be somewhat different than in the other regions noted above. In the highest white income class rent probably constituted about 7 per cent of the total income, while in the next two highest groups ($3,000-$3,499 and $3,500-$3,999) about 3 per cent.[11] Rent was not an important source of income at any income level below the median. Negro families had very little income from rent—about $3,200 in total for 798 families. Of this $150 was received by one of the two families with over $3,000 income included in the sample. Almost half of the rental income was received in $1,000-$1,499 income group. (Median income was a little less than $500.)[12]

Region, Part One, *Family Income*, "Urban and Village Series" (USDA Misc. Pub. No. 345), p. 170.

[11] Consumer Purchases Study, *Family Income and Expenditure, Southeast Region*, Part One, *Family Income*, "Urban and Village Series" (USDA, Misc. Pub. No. 375), p. 211.

[12] *Ibid.*, p. 288-289.

The data for New York City for 1935-36 are not very revealing. Less than half as large a proportion of the families received any rent from property as in Chicago, which is probably indicative of the greater importance of corporate-owned rental property. For native white complete families in the native area, rent was most important as a source of income in the next to the lowest income group ($250-$499) and generally more important in the four lowest groups than in any higher group.[13] Rent income was of little significance to Negro families in New York. Only 14 of 710 families received any rent and the total was about $2,000.[13]

TABLE 3

CUMULATIVE DISTRIBUTIONS OF TOTAL INCOME, INCOME FROM RENTS AND DIVIDENDS. WISCONSIN, 1936

Income Group	Recipients %	Income %	Net Rents %	Net Rents Adjusted %	Dividends %
$ 1- 2,000	91.99	69.87	63.69	52.56	15.91
2,000- 2,999	97.09	81.43	77.08	64.26	22.06
3,000- 3,999	98.40	85.71	82.86	69.71	26.45
4,000- 4,999	98.93	87.97	86.22	73.13	30.04
5,000- 5,999	99.22	89.49	88.55	75.64	33.15
6,000- 7,999	99.52	91.45	91.57	79.14	38.23
8,000- 9,999	99.67	92.69	93.54	81.54	42.04
10,000-14,999	99.83	94.58	96.19	85.58	50.68
15,000-19,999	99.89	95.63	97.36	87.83	56.49
20,000-24,999	99.92	96.28	97.71	89.01	60.39
25,000-49,999	99.97	97.89	99.05	93.33	74.50
50,000-99,999	99.98	98.85	99.41	96.21	85.67
100,000 and over	99.99	100.00	100.00	100.00	100.00

Source: *Analysis of Wisconsin Income* (N.B.E.R.).

The Wisconsin income tax returns for 1936 and their subsequent analysis and extension to include all income receivers in the state by the National Bureau of Economic Research provide data useful for present purposes. In Table 3 the cumulative distribution of net rents is compared with the distribution of total money income. In addition, an attempt has been made to distribute to individuals the rents received on corporate-owned residential properties.

Considering only the rents received directly by individuals, about 64 per cent of the total net rents were received by persons in the group with incomes under $2,000. This group received 70 per cent of the total income. The income groups with less than $5,000 income received 88 per cent of total income and 86 per cent of net rents.

---

[13] Study of Consumer Purchases, *Family Income and Expenditures in New York City, 1935-36* (Bureau of Labor Statistics Bulletin No. 643), Vol. I, p. 87.

The adjustment of the data to include rents received via corporations changes the results somewhat, but not radically. About 53 per cent of the adjusted net rents go to groups with incomes less than $2,000 and 73 per cents to groups with less than $5,000. The cumulative distribution of dividends may be indicated—only 16 per cent to groups with incomes less than $2,000 and 30 per cent to groups with incomes less than $5,000.

A special report on Kentucky income tax returns indicates the distribution of income from net rents and royalties—a figure assumed to be synonymous with net rents for our purposes. Since the data reflect only the position of persons filing income tax returns, the results are presented in terms of the percentages of income from rents, adjusted rents, and dividends (Table 4). The lowest income group included in the table ($1,000-$2,000) received 3.4 per cent of its income from rents, while the highest income group (over $100,000) received only 0.6 per cent. Adjusting the rents to include corporate property did not change the relative positions. The lowest income group received about 4.5 per cent of its income from dividends, while the highest received 14 per cent. It is, of course, not impossible that the selective

TABLE 4

PERCENTAGE OF TOTAL INCOME, BY INCOME CLASSES, DERIVED FROM NET RENTS, ADJUSTED NET RENTS AND DIVIDENDS, KENTUCKY, 1942

Income Class (thousands)	Mean Income	Percentage of Income from		
		Net Rents	Net Rents, Adjusted	Dividends
1- 2	$ 1,537	3.44	4.02	4.67
2- 3	2,774	3.49	4.08	4.76
3- 4	3,720	2.86	3.28	3.36
4- 5	4,785	3.46	4.10	5.13
5- 6	5,901	4.40	5.26	6.88
6- 8	7,436	3.87	4.82	7.69
8- 12	10,542	4.11	5.34	9.90
12- 17	15,374	3.27	4.82	12.54
17- 25	21,970	4.22	5.98	14.14
25- 35	31,319	2.78	4.77	16.06
35- 50	43,580	2.08	4.35	18.37
50- 70	61,075	1.63	3.67	16.49
70-100	89,104	1.00	2.64	9.99
Over 100	197,512	0.61	2.34	14.00

Source: *Kentucky Incomes* (Department of Revenue, Commonwealth of Kentucky, Special Report No. 5), Table A-1.

Note: Income group of less than $1,000 was deleted because returns can hardly be representative of the population in any sense. The exemptions established by law were $1,000 for a single individual and $2,500 for a man and wife. The $1,000 to $2,000 class must include mostly single-member families.

process in filing income tax returns included in the lowest income groups a disproportionate share of the low-income individuals in the state with any rental income.

Table 5 indicates the results obtained from an analysis of federal income tax returns for 1946—the year for which the federal income tax probably included the largest proportion of the total population. The income range of $10,000 to $19,999 had the largest proportion of income from net rents and royalties. Two other income ranges had a higher proportion than did the lowest-income group. These data reveal another limitation of the available data on rental income; namely, the large element of underreporting. The Department of Commerce estimated that rental income of persons (excluding imputed rent on owner-occupied houses) was about 3.96 billion dollars in 1946.[14] This is more than twice the rental income reported to the Internal Revenue Bureau. Thus the true distribution of rental income could be quite different than that revealed by income tax data or, for that matter, by survey data.

TABLE 5

INDIVIDUAL INCOME TAX RETURNS FOR 1946, BY ADJUSTED GROSS INCOME CLASS, ADJUSTED GROSS INCOME AND NET RENTS AND ROYALTIES AS PER CENT OF ADJUSTED GROSS INCOME
(Money figures in thousands of dollars)

Adjusted Gross Income Class	Adjusted Gross Income	Net Rents and Royalties	Net Rents and Royalties as Per Cent of Adjusted Gross Income
Deficit	247,206	— 583	
Under $1,000	5,948,038	130,484	2.19
$ 1,000– 1,999	22,926,710	238,661	1.04
2,000– 2,999	33,127,834	235,655	.71
3,000– 3,999	24,113,899	189,623	.79
4,000– 4,999	12,380,802	132,517	1.07
5,000– 5,999	5,685,741	83,677	1.47
6,000– 9,999	9,602,763	212,797	2.22
10,000–19,999	8,766,727	221,916	2.53
20,000–99,999	9,711,073	229,326	2.36
100,000 and over	2,066,419	36,792	1.78
Total	134,082,800	1,693,529	1.26

Source: *Statistics of Income for 1946*, Part 1. Preliminary Report of Individual Income Tax Returns and Taxable Fiduciary Income Tax Returns Filed during 1947 (U. S. Bureau of Internal Revenue), pp. 16–20, Table 2.

Thus far our data have shown the significance of rent receipts at each of several levels of income. The estimates have indicated that rental income is not distributed, in some rough sense, more unequally than total income. To the extent that it is distributed differently than total income, more seems to go to lower-income groups, less to middle-income groups, and in some but not all instances, more to higher-income groups.

---

[14] *National Income*, Supplement to *Survey of Current Business*, July, 1947, pp. 14 and 19.

TABLE 6

CUMULATIVE DISTRIBUTION OF TOTAL INCOME, RENTS RECEIVED AND RENTS PAID, MINNESOTA, FOR STATE AND FOR CITIES OVER 100,000, 1938–39

Income Class and Area	Cumulative Total Income %	Cumulative Economic Units %	Cumulative Percentages of	
			Net Rents* Received	Rents Paid†
State				
Negative	−.25	.75	−1.41	.23
$ 0– 249	.21	4.96	.46	2.02
250– 499	3.29	16.02	11.93	7.79
500– 749	10.26	31.07	26.57	19.38
750– 999	18.45	43.88	38.34	30.57
1,000–1,249	28.55	56.05	48.46	44.82
1,250–1,499	38.71	66.11	60.96	56.05
1,500–1,749	48.70	74.54	67.34	66.53
1,750–1,999	58.68	81.76	73.67	76.82
2,000–2,249	66.64	86.87	81.09	83.41
2,250–2,499	72.78	90.38	84.08	87.84
2,500–2,749	77.59	92.87	88.75	90.80
2,750–2,999	80.89	94.43	93.43	92.88
3,000–3,499	86.12	96.64	95.25	96.48
3,500–3,999	89.54	97.89	99.47	97.72
4,000–4,499	91.68	98.59	101.07	98.41
4,500–4,999	93.03	98.97	101.54	98.70
5,000 and over	100.00	100.00	100.00	100.00
Cities over 100,000				
Negative	−.11	.16	−5.66	.03
$ 0– 249	.07	2.24	−3.92	1.35
250– 499	1.65	9.33	4.73	5.71
500– 749	5.48	19.25	18.30	13.97
750– 999	11.50	30.74	30.11	24.72
1,000–1,249	19.75	42.95	38.59	37.40
1,250–1,499	28.85	53.97	50.44	48.07
1,500–1,749	38.77	64.24	57.18	59.54
1,750–1,999	49.28	73.59	64.80	70.90
2,000–2,249	57.89	80.38	74.52	78.54
2,250–2,499	65.06	85.42	76.26	84.25
2,500–2,749	70.29	88.74	80.28	87.80
2,750–2,999	74.42	91.15	85.64	90.40
3,000–3,499	81.38	94.77	87.92	95.52
3,500–3,999	85.07	96.42	95.03	97.18
4,000–4,499	87.51	97.39	97.60	98.02
4,500–4,999	89.64	98.14	99.16	98.54
5,000 and over	100.00	100.00	100.00	100.00

* Rents received minus rent losses.

† For one income class for state and for three for cities over 100,000 it was necessary to estimate rent paid. Number of economic units for which estimates were made was less than one per cent of total in either case.

Source: *Minnesota Incomes, 1938–39* (Minnesota Resources Commission), Vol. I, p. 13, Vol. II, pp. 203, 209, 255, 256.

From the study of Minnesota incomes for 1938-39, it is possible to estimate the cumulative distributions of rents paid and net rents received. This has been done for the state as a whole and for cities of 100,000 or more. Net rent includes royalties from mining as well as rents from nonresidential property.

The data for cities over 100,000 are most significant for our purposes. The cumulated percentages of rent receipts and rent payments cross at some point between $1,500 and $1,749. At any point in the cumulative distributions below the point of crossing, the accumulated rent receipts exceed rent payments; in other words, the lower-income groups received more as rent payments than they paid out as rent on housing. The inclusion of negative incomes distorts the presentation somewhat, as can be seen by inspection.

The data available have not made it possible to reflect the declining relative significance of rental incomes in the national income since the early thirties. Sample studies and income tax data underestimate rental income more than total income and the underestimation varies from study to study. Our conclusions require only the assumption that the degree of underestimation in each study of rental income is about the same for every income group.

Data are available indicating the distribution of rental units by size of the structure. Though these data do not tell us anything directly about incomes of landlords, certain inferences can be made. It seems unlikely that many individuals in the lower third of the income distribution would own structures containing ten or more apartments; it also seems unlikely that the highest income groups would generally invest in small structures of two to six units. Our data have indicated that the middle-income groups do not hold a very large fraction of rental property. In all urban areas in the United States, about 75 per cent of all rented housing units were in structures with four or less units and only 15 per cent were in structures with ten or more units in 1940.[15] Even in the New York–New Jersey metropolitan area, only 40 per cent of the rental units were in structures with ten or more units. In the Chicago metropolitan area, roughly a quarter of the rental units were in such buildings.[16] These data indicate to the writer that rental housing is not the type of investment that is likely to attract the funds of the higher-income groups to the same degree as stocks, bonds, or direct investment in enterprise providing for greater ease of control and management. Obviously exceptions exist in the development by one firm of communities of small structures most or all rented, but these developments do not as yet constitute more than a minor fraction of total rental units.

---

[15] *Sixteenth Census of the United States: 1940, Housing,* Vol. II, Table 4 of the relevant parts.

III. *Rent Decontrol and Low Income Tenants*[16]

Some of my friends who are not economists have not been swayed in their favorable attitude toward rent control by the evidence presented above on the income distribution effects of rent control. They have resisted because they believe, even if what these figures reveal is true, that it would be the lowest income tenant families that would be harmed most by removal of rent control. This viewpoint has been strengthened by revelations of BLS studies of rent increases after decontrol. These surveys have indicated that the largest relative rent increases have occurred in the low-rent group. Out of fourteen cities surveyed in early 1950, this was true in twelve. But does this mean that the rents paid by low-income families have risen much more than rents paid by higher-income families? Not necessarily. Because of choice or the inability of tenants to find a new rental unit, many fairly high-income tenants now live in low-rent units. As a result, in only two of ten cities in which the BLS classified rent increases by income groups was the lowest income group (under $2,000) subjected to significantly greater rent increases than other income groups. Dallas was the most extreme case. Tenants with incomes less than $2,000 and living in units free to rise had an average rent increase of 32 per cent. The highest income group (over $5,000) has a rent increase of 10 per cent. Spokane was the other city in which rent increase (11 per cent) for the lowest income groups (under $2,000) was considerably above that of the highest income group (5 per cent for incomes over $4,000). Salt Lake City occupied an intermediate position—8.7 per cent increase in lowest group, 4.2 per cent in the highest group, but with increases in the middle income groups being roughly the same as in the lowest. In the remaining seven cities, the consistency of the relative increase by income groups is remarkable.[17]

IV. *Summary*

Our analysis of the relative income positions of tenants and landlords is subject to numerous qualifications, largely due to the nature of the available data. Most of these limitations have been noted earlier and need not be repeated. A further one should be noted. The data relate to income received in a given year. This may not be an adequate measure of consumption (welfare) if income fluctuations from year to year are important or if the age distribution of the contrasted groups differs significantly.

---

[16] As an aside, it may be noted that home-owning families with incomes below $2,000 in 1948 paid out 21 per cent of their income as housing expenditures while renters in the same income range spent 23 per cent of their incomes for rent. *Federal Reserve Bulletin*, September, 1949, pp. 1049-1050.

[17] All data from BLS reports reprinted in Extension of Rent Control, *Hearings*, Committee on Banking and Currency, House of Representatives, 81st Cong., 2nd sess., pp. 483-498. The other cities for which comparable data were obtained were Topeka, Beverly Hills, Eugene, Madison, Milwaukee, Omaha, and Wichita.

This paper has not attempted to deal with the general desirability of rent control as a device for redistributing income. But it should be noted that if the relative income position of landlords was superior to that of tenants in each and every instance, there are valid objections to rent control as a means of transferring income.

I do not want to argue that the evidence presented indicates that landlords are poorer than tenants. But the data certainly do not indicate the contrary—that landlords have significantly higher incomes than tenants. Thus if one of the objectives of rent control is to aid low-income people—and I can find no other important objective that rent control does achieve—it does not achieve that objective. Undoubtedly there are relatively poor tenants renting from relatively rich landlords, but the converse must also exist. The income transfer that is involved in rent control is not one that can be justified on the usual grounds used for supporting progressive income taxes or free public education. It has, in my opinion, at least, no justification except the political one that there are more tenants than landlords.

DISCUSSION

William D. Grampp: In Professor Grebler's paper there are two aspects of the supply function of rental housing which call for comment. One is its relationship to the housing stock and the other its operation under rent control. The purpose of my comment is to aver the relevance of conventional price theory to both matters.

I would like to suggest the usefulness of a clear distinction between the stock of rental housing, as a capital agent, and its income expression in the supply function, which relates rent and the quantity of housing offered for rent in any time period. This conventional distinction between capital and income will have a different application for durable than for nondurable goods. But the durability of housing capital does not alter the fact that in the rental market what is traded is services, or income.

It is in order to remark on the questionable meaning of measuring the housing stock by the number of units standing as distinct from their value. Individuals are not interested only in shelter when they rent housing any more than they buy only transportation in an automobile or nutrition alone in food. I do not feel the difficulty of appraising the quality of housing is overcome by taking a physical inventory of the size of rooms, improvements, location, and the like.

The usefulness of distinguishing the housing stock from the supply function becomes apparent when a comparison is made between the value of all units occupied by tenants (capitalized at current rents) and the value of all units in the stock (capitalized at the same rents). So long as there are vacancies, the former will be less than the latter; or, put simply and less carefully, there will be an inventory of a kind of rental housing. The existence of vacancies—an unplanned inventory, to be sure, under competitive condtions—suggests the similarity between the housing market and others in which output cannot be adjusted to changes in demand and price except over a long period.

Nevertheless, the quantity of units offered for rent does seem capable of adjustment. The supply function, therefore, is not altogether inelastic. If it were, and if approximately competitive conditions obtained, there never would be any vacancies. A decline in demand would produce, in the short run, a decrease in rents sufficient to attract full occupancy. Since this does not occur, the supply function does not have a zero elasticity. Changes in demand consequently will affect the quantity offered for rent as well as rents. Demand changes also will change the capital value of housing, although less than if the supply were completely inelastic; and it is conceivable that a change in demand can have at least as much effect (although in the opposite direction) on both capital values and current rents as a change in construction costs. This suggests that, although annual net investment in residential construction is determined less by current building costs than by the capital value of old housing, this value is not a datum but is determined by demand and is subject to change, particularly in periods of fluctuating real income.

The reasons for the shape of the supply function are not clear to me.

Professor Grebler noted that the cost of rental units is almost wholly fixed and that marginal costs are very small. This seems reasonable, although it could be argued that the occupancy of a rental unit creates a variable and hence marginal cost which could become a consideration to a landlord at certain times. Excluding this possibility, we are left with imperfect competition, including price inflexibility, to explain the shape of the supply function. As drawn by Professor Grebler, it is quite elastic over a certain range. Yet Professor Johnson's data on the distribution of rental income suggest a dispersion of ownership which makes collusion among landlords unlikely. Although Professor Grebler has analyzed multiple-unit dwellings while the rental income data refer to single leaseholds as well, it seems implausible that the degree of competition between the two should be extremely different, except in very large cities where single leaseholds are uncommon. So long as families are free to choose between the two types of structures, the difference would be reduced if not eliminated.

It is the somewhat strange view of consumer choice in Professor Grebler's remarks on rent control which prompts my second set of comments on the supply function. His belief seems to be that rent control has not created a misallocation of resources between rental housing and ownership, because families have come to prefer home ownership to renting in greater proportion than before the war. He attributes this change in demand to high incomes, publicly-supported credit, accumulated liquid balances, and, curiously, to rent control. He states: "It is equally questionable whether substantially more rental housing would have been produced in the absence of rent control."

The question could be settled promptly if we knew the quantitative importance of each of the factors which have increased the demand for home ownership. Since this information is not available, I should like to call on price theory for assistance. It is my belief that "the phenomenal increase in home ownership" is mainly the result of the inability of families to obtain rental housing and of their subsequently being driven to ownership. This does not deny the relevance of the other factors but subordinates them to rent control.

So long as in the rental market the quantity demanded exceeds the quantity supplied, one cannot maintain that families are leaving it because they do not care to rent. Although ownership probably would have increased in the absence of control, I cannot believe the increase of the last five years would have taken place had families been free to choose between tenancy and home ownership. To believe otherwise is to suppose that very little disequilibrium has been created by rent control, that the excess of the quantity demanded over supplied is small. One must suppose that the increase in capital values, because of the higher price level and even higher construction costs, has affected owner-occupied units mainly and rental units indifferently, so that today's controlled rents are not much different from those which would rule in an unregulated market. It is my belief that today's fixed rents are far less than they would be in the absence of control, and that the difference between controlled and equilibrium rents is a measure of disequilibrium. That disequilibrium is substantial is suggested by estimates of probable rent increases should control be removed and by actual rent increases where it has been eliminated.

It may be felt that my argument has an a priori air about it, and that the argument which it opposes is perhaps of the same quality. I do not think either should receive less attention because this may be so. Those who think otherwise, however, may take counsel from the master empiricist, Hume, who said that when confronted with a miracle one believes only if disbelief is the greater miracle. It seems to me that the greater miracle in the problem before us is to believe that an individual who buys a house because he cannot rent is showing a preference for home ownership over renting.

THE HOUSING PROBLEM: II. LONG-RUN EFFECTS OF GOVERNMENT HOUSING PROGRAMS

THE ROLE OF THE FEDERAL GOVERNMENT IN URBAN HOUSING

By Lawrence N. Bloomberg
Public Housing Administration

When I was asked to prepare this paper, it was suggested that the topic should be, "A Rationalization of the Federal Government's Intervention in Housing." To have accepted this subject would have, in a strict sense, put me in the position of being an apologist for government aids to housing. It would have required me to make a case for the government's taking action in a field in which I believe it has a grave responsibility. Stated positively, I believe that no apology, or rationalization, is necessary. Nor do I believe that the direct and forceful action which has been taken is in any sense intervention.

In a democracy, government is no third party which intervenes for the protection of an alleged interest. In the United States, the government is the people, who every two years exercise their constitutional right to change the complexion of the Congress, if they see fit, and every four years sit in judgment on the president, or the president's political party.

It has become a hackneyed campaign maneuver for the party out of office to try to separate the people from their government, to erect in the voter's mind an image of his government as a menace—an abstract evil influence which stands between the voter and lower taxes, between the voter and higher profits, between the voter and whatever selfish interest he might have.

The majority of those who pontifically speak of government interference or government intervention really question the basic concept of democracy itself. They consider themselves an intellectual or economic elite who do not believe that the people can, in wisdom, decide for themselves. I believe that where political opinion is free and not induced by force of arms or concentration camps, the social and economic policies of government are determined by the people. However, in a civilization as complex as ours, in an economic, social, and institutional structure so complicated, it is often difficult for the voter to decide what the policies of his government should be.

It is no longer possible for each citizen to get his information directly as in the town meeting, to cross-examine the town selectmen, and then and there, with no intervening media, to make up his mind, and vote accordingly.

Today, government is big business—not only the federal government but on down to the states, the counties, and the cities. Few political issues are clear cut. There is hardly a step taken by government on which there is universal agreement that it benefits all. More than ever, the "greatest good for the greatest number" becomes a critical standard for political judgment.

On almost every political issue the public is subjected to a propaganda barrage. Established pressure groups grind out an almost continuous flow of slanted "educational" material. New groups arise to occasions almost as rapidly as letterheads can be printed. The public reads news columns of not always objective reporting and editorials that reflect the political philosophy of the publisher. People are confronted with pamphlets, flyers, and billboards, often on both sides of a question, each proclaiming to be the truth.

Pressure groups try to influence the people to become identified with their particular bias. In social programs particularly, cost and benefit are rarely individually equated for a large part of the population. The group which personally benefits least but which must bear its proportionate share of the cost, organizes to attract supporters by appealing to the inherent self-interest in most of us. On the other hand, what are called public interest pressure groups direct their appeals to the inherent social responsibility which is also in most of us.

We have made real social gains in this country only because a majority of the people have learned that advantages cannot be assessed in terms of personal benefit—that what is good for society, is good for all, regardless of whether we as individuals stand to gain.

Government action in housing grew out of demands by the people that their government take action to assure security of home ownership, adequate home financing, and a supply of decent housing within their means.

Action in the field of urban housing is a relatively new activity of the federal government. Although there had been much concern with housing during World War I and during the boom of the twenties and the falling off of urban construction after 1925, the federal government took no direct action in the urban housing field until the depression of the thirties. Until this time the financing and construction of housing was solely the responsibility of private enterprise. The federal interest was almost entirely limited to the regulation of financial institutions over which it had supervision.

Controls over housing were then, and are now, solely a matter for local government. Zoning, city planning, building and housing codes, subdivision regulation, health and sanitation codes, and exercise of the police power with respect to housing are entirely functions of local governments. I should say at this point, however, that activities of the federal government which I will discuss later have had a significant—and extremely beneficial—effect upon local action and enforcement in this field.

The first action on the part of the federal government came in 1932 with the establishment of the Federal Home Loan Bank System. In concept, this System was similar to the Federal Reserve System and the early Land Bank System, but operated in the field of home mortgages.

Since that time, the federal government has had a tremendous impact upon housing through numerous actions. To name some of the more important: the Reconstruction Finance Mortgage Company; the activities of the Public Works Administration under the National Recovery Act; the Federal Savings and Loan Deposit Insurance Corporation; the Federal National Mortgage Association; a long list of war measures involving direct government construction of houses and community facilities for war workers, rent control, exercise of controls by the War Production Board; immediate postwar measures including the Servicemen's Readjustment Act, providing for the so-called "G.I. loans," and the Veterans Emergency Housing Act which contained a number of provisions aimed at overcoming the housing shortage; the urban redevelopment and slum clearance provision of the Housing Act of 1949; a recent significant action was the issuance of regulations by the Federal Reserve Board and the Housing and Home Finance Agency to curb housing credit.

There are three major activities that I have not mentioned, because I want to treat them in some detail. These are: the Home Owners Loan Corporation, the Federal Housing Administration, and the Public Housing Administration (originally the United States Housing Authority). It is not my purpose, however, to describe in detail the legislation governing the activities of these agencies or to discuss their methods of operation. Furthermore, I will exclude from consideration any wartime activities of the agencies. What I want to do is to examine why the federal government entered these fields, what the effect of the operations has been, and to see if we can draw any conclusions as to the circumstances under which the federal government might be expected to take action in the housing field under peacetime conditions.

In 1933 the Home Owners Loan Corporation was launched. This action by the federal government was essentially a gigantic rescue operation for homeowners and the individual and institutional mortgage lender. The whole shaky structure of home mortgage finance built upon the boom of the twenties was crumbling. Widespread unemployment and a string of closed banks had paralyzed the nation. Foreclosure threatened a substantial portion of homeowners; financial institutions, faced with demands for cash from their depositors or investors, held frozen mortgage paper; the cities were in dire straits because of their inability to collect not only current real property taxes but also a large volume of delinquent taxes.

There was little or no opposition to the government's answer to the widespread and insistent demand that something be done. Congressional hearings on the HOLC legislation were relatively brief. Few witnesses opposed the bill. The New York Savings and Loan League, however, adopted a resolution in opposition, saying "every reasonable consideration is now being extended by our institutions to every homeowner whose economic distress is caused by unemployment or other adverse conditions beyond his control."[1] In Congress, the debates largely centered around the extension of greater relief than was proposed.

By issuing bonds to mortgage holders and taking up the loans, the HOLC almost immediately shored up the shaky structure of mortgage finance. It has been estimated that 40 per cent of the owners of mortgaged one-to-four family nonfarm homes applied to the HOLC for assistance. In twenty-five states over half of the potentially eligible owners applied, and in two, Arkansas and Mississippi, the figure exceeded nine out of ten.[1] Ultimately, nearly one out of ten of all owner-occupied nonfarm homes had mortgages held by the HOLC; this represented nearly one out of five potentially eligible cases.[2]

There can be no question that the HOLC operation was a financial success. With the program essentially liquidated, one way of figuring shows a small profit, another way a slight percentage of loss. Of course, it can be said that the success was due to the period during which HOLC operated. But it is not in dollars and cents that the HOLC must be appraised. Its concept and operation must be weighed against what the cost of the alternative might have been.

How far would the lynching parties for sheriffs attempting foreclosure sales have gone? What would have happened to the respect for contract upon which our social, economic, and political system is based? What would have been the political ideology of men and women who would have lost their homes but for the HOLC? Or even of those who would have starved but for federal relief? And how did we happen to find ourselves in this situation? One thing is certain; it wasn't a result of government action. The fact is, our private economic institutions were not geared to the current requirements of our people. But memories are short—memories of that time almost twenty years ago when the federal government stepped in to bolster tottering institutions, when about 20 per cent of the nonfarm home mortgage debt and a large part of the farm mortgage debt were held by the federal government in trust for the American people.

---

[1] *History and Policies of the Home Owners Loan Corporation*, by C. Lowell Harriss (National Bureau of Economic Research) (not yet published but quoted with permission).

[2] *Ibid.*, Vol. II, page 25.

The depression persisted. The peak of residential construction had been reached in 1925 and had been declining even before 1929. Not only was the construction of new units at an extreme low, but the existing stock of housing was also badly deteriorated through unwillingness or inability to keep it in repair. There was a tremendous backlog of deferred maintenance and rehabilitation.

Because of the somewhat longer-term decline in construction, the unbalance which had existed between housing supply and potential demand in the middle twenties had considerably narrowed. A relatively high vacancy rate existed in the cities but this was largely due to the high doubling-up of families to save rent and to the movement from the cities to the farms during 1930-33. By 1934 there was an evident potential demand for housing. The city to farm migration was beginning to reverse itself; new family formation was showing an increase as reflected by a rising marriage rate; there was evidence of a desire to begin to catch up on some of the accumulated disrepair.

Despite all of these portents nothing happened. The construction industry was still frozen. Two basic causes predominated. First, the supply of capital for financing construction had greatly diminished; second, but far more important, was the fact that capital would not take the risk. Fresh in the minds of institutional lenders and investors were the real estate financing excesses of the twenties. Foreclosures on urban homes had reached a peak of 273,000 in 1932, had dropped but slightly to 272,000 in 1933, and during the first three months of 1934 were at the rate of 20,000 a month. Closed banks and building and loan associations and the failure of guaranteed mortgage bonds were still vivid pictures in the minds of the mortgage market. Private capital was suffering from a severe case of arteriosclerosis and yet there were conditions present of a pent-up demand for new housing and for modernization and repair. The reaction against the bad practices of the twenties had made financial institutions perhaps overly cautious. They were not looking for reasonable risks but only sure things—and sure things in the mortgage field were few and far between in those days of 1934.

At this juncture, the President sent to the Congress the National Housing Act with a strong message urging passage. The purpose of the bill as stated in its preamble was "to improve nationwide housing standards, provide employment, and stimulate industry; to improve conditions with respect to home mortgage financing, to prevent speculative excesses in new mortgage investment, and to eliminate the necessity for costly second mortgage financing by creating a system of mutual mortgage insurance. . . ."

As I read the testimony on the bill in the course of writing this paper, I could not help but be impressed with the clearness of purpose and intent of its authors and backers. The proposal itself was, in essence, a very simple one. Through direct and work relief and public works, the federal government had been pumping money plasma into a very ill nation. The HOLC had started to help the homeowner and to brace financial institutions. The Reconstruction Finance Corporation, through its loans, had staved off disaster in numberless enterprises. What was needed was a self-generating activity in one of the most important, and sickest, segments of our economy—the construction industry. The National Housing Act was designed to provide the necessary stimulus.

As one of the Administration spokesmen said in explaining the bill: "What we want to do is to create conditions in which the building industry can go ahead and provide higher standards of residential facilities on a sound basis to people who can afford it, and at costs and prices which they can afford to pay. . . . To make new mortgage money effective, and to get a resumption of activity in the mortgage market, we are proposing to set up an insurance feature to insure the lender on the best type of home-mortgage instrument."[3]

The hearings reveal substantial support for the measure. It was endorsed by the National Association of Real Estate Boards, by the Structural Clay Products Institute, by the U. S. Chamber of Commerce whose spokesman, its president, said: "This measure now before you is an attempt on the part of the Government to give the necessary encouragement to private capital to go into the construction of homes."[4] Also in support were mutual savings banks through spokesmen for the Savings Banks Trust Company and the Mortgage Conference of New York. A spokesman for the Ohio Association of Real Estate Boards, the Building and Professional Associates of Ohio, and the National Retail Lumber Dealers, in support of the proposed legislation, presented the results of a questionnaire which showed widespread inability to secure mortgage credit.

The only important opposition to the bill came from the building and loan association group. A spokesman for the U. S. Savings and Loan League said: "I think this proposal in Section 5 of Title I (the mutual mortgage insurance provisions) and in Title II (national mortgage associations) is the fundamental beginning of the nationalization or socialization of the whole urban mortgage business in this country."[5]

---

[3] *Hearings* before Senate Committee on Banking and Currency on National Housing Act, 1934, page 52.

[4] *Ibid.*, page 108.

Other opposition came from a group calling itself the Home Owners Protective Association. Its spokesman said: ". . . the bill sets up machinery which heads straight for Federal regimentation of American home buying, home building, home finance, and home repair. . . . Call it by any name you choose, the smell of such regimentation of American homes will be the same in the nostrils of the American home-owning public."[6]

The National Housing Act, establishing the Federal Housing Administration, became law in June, 1934. The FHA insured mortgage and methods of operation had far reaching consequences. With the standardized FHA mortgage instrument, mortgage credit could flow over the country to the spots it was needed. Interest rates became more or less uniform throughout the nation because of the FHA yardstick. High interest rate second mortgages became of markedly less importance due to high ratio FHA loan. The amortized mortgage, including savings for taxes and insurance, became a standardized practice. Better land planning principles were introduced, particularly in the garden type rental housing projects.

In 1938 a significant amendment was made to the National Housing Act. To encourage home production in the low-priced field and thus to broaden the market, the Congress empowered the FHA to insure mortgages up to 90 per cent of value, and for a twenty-five-year term on new homes costing $6,000 or less. Previously the limitation had been an 80 per cent loan for a twenty-year term. This was a response on the part of the federal government to a widespread demand that something be done to stimulate production in that segment of the housing market which had been so long neglected. I have no answer to the very proper question of why the private construction industry did not move into this field if there was such evident demand. I can only say that it did not until the enactment of this amendment to the National Housing Act.

Although it is not my purpose to discuss the war features of the National Housing Act, it should be noted that during the war and during the postwar housing shortage the FHA was used to channel construction into particular price groups, into particular localities, and into rental housing. While not all of these activities could be justified on the basis of the long-term objectives of the Act—particularly those which loosened valuation procedures and abandoned the doctrine of economic soundness—they were undoubtedly effective as emergency measures.

---

[5] *Ibid.*, page 271.

[6] *Ibid.*, page 384.

Through the National Housing Act, the federal government met the need for the development of reasonable credit sources for housing on fair terms consistent with the nature of the commodity, and yet preserved the private financing and private home building industry for that majority of American families who can pay their way for decent housing. The FHA is now completely accepted as an integral part of the private enterprise system. It is not a political issue in the Congress. I have not heard it seriously opposed in recent years by even the most vociferous objectors to "government interference or intervention." On the contrary, every liberalization and extension of the FHA has been vigorously supported by the industry. No one to my knowledge has said that the Federal Housing Administration was all right as an emergency measure; it has served its purpose; it is now time for the government to get out of the mortgage insurance business and turn it over to private hands.

The third area of action by the federal government which I want to discuss is that of federal assistance to localities for the housing of low-income families and the clearing of slums.

Prior to the early thirties there had been a long history of concern with the economic and social problems of the slums. There had been numberless investigations, particularly in the larger urban centers, when tenement fires or collapsing buildings or outbreaks of disease focused attention upon deplorable slum conditions. Various attempts by cities to invoke the police power to enforce sanitary or fire codes usually failed because landlords were not willing to make the necessary expenditures and threatened rather to close the buildings. Public officials were not willing to see large numbers of families thrown out of their dwellings. With the depression, the attention of the public and public officials was directed, as it had never been before, to the widespread suffering and almost subhuman living conditions of slum families.

In 1933, the Housing Division of the Public Works Administration was established pursuant to the National Industrial Recovery Act of the same year. The Housing Division began, as the RFC had in 1932, a program of loans to private limited dividend corporations. The RFC made only one such loan and although by the end of 1933 the PWA had five hundred applications, only seven loans were made. Applications were rejected primarily because of excessive site valuation, doubtful worth of the equity offered, and most importantly because the rentals proposed would not meet the needs of low-income families. For the seven limited dividend projects actually financed, rentals averaged about $10 per room per month not including most utilities.[7]

Early in 1934, the Housing Division inaugurated a program of direct federal construction pending enactment of adequate state legislation. It should be noted here that the available evidence seems to indicate that it was not the philosophy of the PWA that the federal government should build, own, and operate the projects but that this was merely an emergency step to get something under way. To achieve low rentals it was possible for the PWA under the George-Healy Act to give the tenants the benefit of a 45 per cent capital grant and to write off the remaining 55 per cent in sixty years at a rate to be fixed by the Administrator (this rate was set at 3 per cent). Rents ranged from $7.00 to $8.00 per room per month, including almost all utilities.

Based on the experience of the PWA Housing Division a new legislative proposal for public low-rent housing was considered by the Congress in 1936. It passed the Senate but failed to come to a vote in the House. This bill was extensively revised and reconsidered by the new Congress in 1937. Thorough but not extensive hearings were held in both the Senate and House.

The Senate hearings of 1937 show very little opposition to the measure. Only a single witness presented testimony against it. Testimony and materials presented in favor came primarily from local public officials, principally mayors and city managers, labor and welfare organizations, church groups, and a variety of civic organizations. In the House hearings, more or less the same groups appeared in favor but there were considerably more opposition witnesses. Opposed were the National Lumber Dealers Association, the U. S. Chamber of Commerce, and the U. S. Savings and Loan League by resolution.

The United States Housing Act was passed by the Congress in August, 1937. It provided a system of federal loans and annual contributions to local housing authorities to enable them to build and operate housing for low-income families from the slums. Substantial local government contributions were required; these were almost invariably contributed in the form of tax exemption. The whole cost to the federal government is the annual contributions which are paid each year in an amount just sufficient to cover the difference between what it costs to operate the projects, including debt service on the loan, and what the families can afford to pay.

The following will give some idea of the income groups being served by public housing projects. In 1940, the average family income at time

---

[7] Material for this and the succeeding two paragraphs was taken from *Hearings* before Committee on Education and Labor, U. S. Senate, on the U. S. Housing Act, 1937.

of admission was $795. This increased to $1,257 in 1945 and to $1,602 in 1949. If these figures are deflated by the consumer's price index of the U. S. Bureau of Labor Statistics in terms of constant 1940 dollars, the figure of $1,257 for 1945 drops to $983 and the 1949 figure drops from $1,602 to $947. Except for the aberrations caused by the war, it is established beyond question that local housing authorities throughout the country have taken as tenants, families which are far down in the low-income segment of the population.

Beginning in 1945, with the Subcommittee on Housing and Urban Redevelopment of the Senate Committee on Post War Planning, there were hearings and reports on eight separate occasions by committees of the Congress; this includes four reports from the Senate Committee on Banking and Currency. These hearings and reports extend over the four-year period from 1945 to 1949. Despite vociferous opposition on each occasion by the real estate and builder groups there was, without exception, a favorable report on the public housing portion of the general housing legislation under consideration. The hearings alone contain nearly 9,600 pages of printed testimony. By an overwhelming vote in the Senate but by the narrow margin of five votes in the House, public housing was retained in the Housing Act of 1949[8] This Act included an extension of the earlier public housing program but with some modifications.

In the Housing Act of 1949, the Congress for the first time established a housing policy for the nation: "The Congress hereby declares that the general welfare and security of the Nation and the health and living standards of its people require housing production and related community development sufficient to remedy the serious housing shortage, the elimination of substandard and other inadequate housing through the clearance of slums and blighted areas, and the realization as soon as feasible of the goal of a decent home and a suitable living environment for every American family. . . ."

The Congress also declared as a policy in meeting these objectives: (1) that private enterprise shall be encouraged to serve as large a part of the total need as it can; (2) that governmental assistance shall be used where feasible to enable private enterprise to serve more of the total need; (3) that local public bodies shall be encouraged to undertake positive programs leading to better planned cities and neighborhoods, to lower housing costs, and to housing of sound standards of design, construction livability, and size for adequate family life; (4) that the federal government should give direct financial aid to localities for the clearance of slums and the housing of low-income families who cannot afford decent private housing.

---

[8] The final Act was passed by a margin of forty-three votes in the House.

It is important to note that throughout this Act there is emphasis on local initiative and local action. The federal government does not build or own any housing. Without exception, every matter is one for local determination. The federal government stands ready to assist only where the locality requests aid through appropriate action of its local governing body.

Public housing and its concomitant, slum clearance, grew out of the concern of a large segment of the American people with the social and physical effects of slums upon the families who are forced to live in them through economic circumstance. The slums, generally, were not willfully made. They are the social consequence of change, of rapid population growth, of advances in technology which did not put enough back into the economic system to enable a substantial number of families to benefit sufficiently from the increased productivity of the nation. Government activity in this field is of a part with soil conservation, which developed after private enterprise had left eroded land resources in the wake of its progress and with flood control, as rivers from denuded watersheds carried destruction to other areas. Public housing, slum clearance, and redevelopment grew out of the pressing necessity for human conservation and of elimination of erosion in the cities, towns, and villages.

There is a unity of concept and purpose in the federal government's three major peacetime housing activities I have described. Each in its own way is illustrative of circumstances under which government activity was demanded, used, and met the need—all to a common purpose of sustaining and broadening a basically free and productive economic and social system.

Through the HOLC, the government preserved the very fabric of a free enterprise system which was on the precipice of complete collapse as a result of the excesses that grew out of its own uninhibited operation.

The FHA served as a vital catalyst to the housing industry to rehabilitate and expand its operations on a basis that it otherwise would not do.

Public housing and slum clearance is positive government action to effect fundamental corrections which private enterprise could not accomplish nor be expected to accomplish until our economy furnishes enough for every family to afford a decent home.

Our nation is great and strong because we have personal liberty and freedom of initiative and opportunity and because we can, under our constitution, change our executive and our legislators and thus the policies of our government as we please. Since our earliest times we have continually modified the functions of government. We have put restraints on license—sometimes called liberty—when the good of the majority demanded it. We have changed or modified institutions as t economic and social order changed.

Schools, roads, and the post office became the function of gover ment. Such regulatory functions as the pure food and drug acts, regul tion of weights and measures, meat inspection, the antitrust laws, a the securities and exchange law all grew out of unbridled use by so of the personal liberties guaranteed under the constitution. When became apparent that our economic system would not, by itself, yiel security, we enacted laws for workmen's compensation, unemployme insurance, old-age assistance, and aid to dependent children.

In housing, as in other important elements of our daily lives, I b lieve that as people require assistance to meet their basic needs, eith institutions must adjust themselves to meet the needs or the people w obtain what they want through their government, and that if our syste of government fails them, they will turn to and try out other form for better or for worse. When we look back on the past twenty years am completely confident that it will be found that the increased soci activities of the federal government in housing and other fields were o greatest bulwark against totalitarianism.

As Erich Fromm points out in his notable book, *Escape from Fre dom,* since the Renaissance, man has been taught individualism an personal liberty, but his social and economic systems have not d veloped in such a way that he can attain, in full measure, the ideal th has been set before him. To unemployed, poorly housed, hungry peopl freedom is far less important than security. In fear they may see escape from the symbol, freedom, and turn to the "leader" who promis jobs, clothes, food, houses. The leader—today it is Stalin; yesterday was Hitler—fails to tell them that along with their economic respons bility they are to be relieved of their political responsibility as well.

The United States is still a young country. A combination of geogr phy, nature, initiative, and inventiveness has taken us where we a and has protected us from the fate of people elsewhere in the world. T continue to do this, however, our institutions must constantly ada themselves to meet the changing needs of our people. To the extent th this can be done without government assistance or action, so much th better. But democratic government must constantly prove in its ow country and to the world that democracy is not only the best politic system on earth but that under it, social and economic institutions pr vide not just a relatively better standard of living but a decent standa of living for all of its citizens.

To achieve this goal there is no question that at times in a nation history certain economic liberties of some must be circumscribed in th interest of the many. Liberties may be lost, not only through gover ment action, but also through failure of government to make its institutions function to serve its people's needs. Government actions which in themselves circumscribe certain individual freedoms may be the very means of preserving basic freedoms of the people as a whole.

Whatever actions are required of government, so long as political liberties are jealously guarded, democracies can survive. There are many in this country—and apparently just short of a majority in England—who do not agree with the policies of the British Labour Government. I want to remind you, however, that the Labour Government's control hangs by a political thread which can be snapped should the English people so decide. Admittedly, as democratic governments are forced in the public interest to assume more functions, it becomes increasingly important that the people maintain a constant vigil. We must maintain the dignity of the individual and preserve our liberty, including the liberty to change our minds. We must carefully study and consider all alternatives, lest we trade too much freedom for security or retain so much liberty that we are free but to starve.

POLICY PROBLEMS IN EXPANDING THE PRIVATE HOUSING MARKET

By Sherman J. Maisel
University of California

It is difficult to discuss government policy in the private housing market in any coherent form. Although unusually successful in expanding demand and production, the programs remain a maze of conflicting aims and measures. I wish, therefore, to concentrate on only a few points, which may be summarized as follows.

1. The generalization that houses can be and are being built only for upper-income groups is incorrect. It is more accurate to state that if existing veteran terms of no or low down payments, 4 per cent interest rates, and thirty-year amortization were made availabe to all, nearly every family receiving a minimum full-time income could afford to purchase a house if it so desired. This desire would require those lowest on the income scale to spend average or above amounts for housing and to accept a suburban house.

2. The above statement reflects a tremendous increase in effective demand, primarily due to government programs to expand the private housing market. Most important of these have been changes in financing, but attempts to lower building costs have achieved some—though only a small part—of what are probably overoptimistic goals. During the past year the government was in the same situation as the Sorcerer's Apprentice: it succeeded in conjuring up a tremendous effective demand but was saved from an inflationary flood only by the war scare which brought the necessary courage to alter policies before they overwhelmed all.

3. The potential results of existing programs far exceed the actual because there has been a failure to think them through, to rationalize them, and to administer them most effectively. Present policies are a welter of conflicting aims, inconsistencies, and lost opportunities. We have no adequate methods of judging the costs of existing programs. We do not know at what points a program becomes a subsidy or if the government gets its money's worth.

It is impossible within the bounds of this discussion to deal with all facets of the housing problem. Thus, I do not discuss the new defense-credit regulations, since as yet little can be said of their long-run effects. Similarly, I do not deal with the housing problems of those families (perhaps 20 per cent) whose income falls below the full-time minimum prevailing wage either because they have no employables or because they cannot obtain work at prevailing rates. I do not believe that these families are part of the private housing market. Nor do I take up problems such as the cycle in production, the design and planning of neighborhoods, or the capacity of the industry, for there has been but little action in these fields.

My aim is primarily to point out how government programs have succeeded in meeting certain fundamental problems while creating others nearly as basic. Whether we return to a normal market or continue in a long period of mobilization, it is vital that we gain a better understanding of what has occurred. The past contains important lessons which should not, as has so frequently happened, be neglected in shaping our new policies.

I

The first nine months of 1950 saw a vivid demonstration of the ability of government programs to expand effective demand. The number of houses started in the first three-quarters exceeded 1,100,000—nearly 50 per cent higher than in any similar period and almost certainly beyond the normal capacity of the industry to supply houses without inflation. This expansion of demand was due primarily to government programs. Although exact figures are not available, probably 60 per cent or more of new houses were directly affected by them. Furthermore, this demand was created by a direct attack on the problem of a suitable relationship between shelter costs and income.[1]

Let me attempt to dramatize the potential change these programs have brought about by contrasting two sets of observations. The report of the House Committee on Banking and Currency on the Housing Act of 1950 states that, "in terms of both volume and suitability for adequate family life, housing that is available, or in prospect of being made available for families in the middle-income third is wholly inadequate." This statement follows others pointing out that new houses are being built only for the top third in the income scale. It is based upon the Committee's evaluation of a large amount of expert testimony. In a similar vein, Charles Abrams, one of the best-informed men in the housing field, states that "only about 11 million of the 37 million American nonfarm families were within reach of the private builder's product"; i.e., about 30 per cent are within the market and 70 per cent are excluded.[2]

In contrast to this, our recent studies of the selling prices of new houses in the San Francisco Bay Area indicate that if terms available to veterans were available to all prospective purchasers, well over 80 per cent of the families in the area had sufficient income to purchase the new house selling at the first quartile (ranging houses from low to high by selling prices) and well over 70 per cent could have purchased the median house in the area. It may be noted that all houses in the Bay Area are produced by union labor and that it is one of the most expensive building areas in the country. The lower quartile house (which is used throughout the discussion for purposes of illustration) sold for about $8,500 and the median house for $10,000. The buyer of the quartile house received a free-standing, suburban house, containing either two or three bedrooms and approximately 950 square feet of living space plus an attached garage. The median buyer in this area paid from one-quarter to two-thirds more than the nation-wide median buyer in the three previous years, as reported by the Survey of Consumer Finances.

---

[1] Cf. *Construction* (October, 1950), p. 11; *Housing Statistics* (September, 1950), p. XI; "Half Veterans Paid Nothing Down on New Homes in Latter Half 1949 in 9 Metropolitan Areas," Bureau of Labor Statistics *News-Release* (November 1, 1950).

[2] Report from the Committee on Banking and Currency, *Housing Act of 1950* (Report No. 1686, 81:2), p. 2; C. Abrams, "The Residential Construction Industry," in *The Structure of American Industry* (Macmillan, 1950), p. 131.

These figures are based upon an extensive survey of selling prices conducted by the Bureau of Business and Economic Research of the University of California. Houses with selling prices of $8,500 required $155 closing costs, and monthly payments to interest, principal, taxes, and insurance of $47.50 when purchased by veterans on guaranteed loans. The income distribution used was the census estimate for all urban families in cities with populations above 250,000 in 1948, which probably falls at least 10 per cent under the Bay Area average. As discussed later, it was assumed that families could pay 25 per cent of their income to cover the mortgage and tax payment.[3]

Examination of national data, particularly those of the FHA, indicates that the nation-wide picture is somewhat more favorable than that of the Bay Area. But it should be kept in mind that housing problems frequently reflect special conditions not made clear in averages and summaries. Such conditions may better be dealt with specifically rather than through general housing legislation. For example, a large number of housing sore spots are caused by discrimination against Negroes. In other localities corruption in the building industry may pull costs out of line. Finally, disorganized centers, commuting, and rental housing are examples of problems which may be peculiar to certain large cities.

Unfortunately, too, the description of the Bay Area housing market brings out a total solution to our problem which is potential, not actual. It is based upon best available terms and also upon the willingness of purchasers in the lower-income ranges to pay at least average amounts from their income for housing.

---

[3] Cf. S. J. Maisel, "Housebuilding in the San Francisco Bay Area," to be published *Journal of Political Economy* (February or April, 1951); U. S. Bureau of the Census, *Current Population Reports—Consumer Income* (Series P-60, No. 6), p. 15; "Part II, 1950 Survey of Consumer Finances," *Federal Reserve Bulletin*, July, 1950; Housing and Home Finance Agency, *Third Annual Report*, calendar year 1949.

II

I had planned to continue the contrast of these two theses—the first stating that houses are being produced for only the top third versus that stating that existing programs could bring houses within reach of all families whose income equals that of a fully employed male—but I found that, while opinion was widespread that middle-income groups in the nation could not afford to purchase houses currently being produced, there were no good sources showing the statistical derivation of this belief.

The data upon which the quotations are based are not suitable for use because: they contain factual inaccuracies; they do not use the best available terms; they are not based on actual housing produced; they are primarily statements of two value judgments—that most new construction is inadequate for family life and that families spend too much for their housing. It should be noted, though, that acceptance of these value judgments could cause disagreement with much of this survey.

I shall, therefore, go on instead to indicate the areas of government activity and show the type of action that has been taken in expanding the private housing market.

Capital Costs. A first group of government programs has aimed at reducing capital costs through the removal of industry restrictions and price fixing. This area of policy has received the greatest attention, but its results to date are most uncertain. Vast amounts have been written on labor restrictions, collusive bidding, price fixing, and other monopolistic practices, as well as on antiquated building codes. There have been campaigns of exhortation, large-scale attempts to enforce the Sherman Act, and sizable efforts expended on code revision. The net effects are not clear. My personal opinion is that the results have been unrewarding, probably because conditions have not been as bad as portrayed. I feel that when a complete study of workable competition is done for the housebuilding industry, it will be found to come closer to a desired norm than most industries. Certain practices may be undesirable, but they are ingrained in the institutional framework of the industry and can be changed only by fundamental shifts in its structure, not merely by alterations in the competitive situation. In addition, some cities and trades are exceptions to this generalization, but their effect on the country's ability to expand the private housing market has almost certainly been overestimated.

Another part of the government's program has cut capital costs through bringing about improvements in the techniques of building, marketing, and designing houses. While results here fall far short of many people's hopes and dreams, they have been considerable. The industry has changed from one characterized primarily by custom building to one in which the average house is built by an operative builder who attempts to adopt many of the techniques of larger-scale production. As an example of this trend, the $8,500 house in the Bay Area was produced in the large majority of cases by firms which completed over a hundred houses each in the course of the year.

A main factor in this change in the industry's structure has been the credit programs of the government. New credit terms for consumers have made possible a changed concept of production and aggressive marketing to an expanded range of income recipients. As a result of the FHA's agreeing to insure lenders against mortgage losses on unsold houses, the amount of construction credit has increased.

These programs have, however, achieved far less than their maximum efficiency. This reduction of costs through improving production was a secondary and unforeseen effect of programs primarily aimed at increasing credit for homeowners. Insufficient attention has been paid to the problems of how these programs might aid construction financing, and important cost reducing opportunities have consequently been lost.

This whole field of the reduction of capital costs still has many unexplored expanses and areas for progress, of which this failure to come to grips with the problem of construction financing is only one example. The newest program of the government in this field—an attempt to cut initial costs through an expanded research program—therefore holds out considerable hopes for progress. It is too new for its results to be interpreted yet.

Financial Costs. The program to reduce financial costs has been more successful than any other sector of housing policy. By financial costs, we refer to the outlays of cash which an owner must make in order to obtain and retain possession of his property. Most important are the down payment, including closing costs, and the fixed monthly payments on interest and amortization.

While policies under particular programs vary, the basic trend has been toward a zero down payment for low-priced houses with increases both in percentage and absolute terms as prices move higher. Interest rates have been reduced, subsidies being paid in certain cases. Finally the amortization periods have been extended to twenty-five or thirty years, with longer periods available in particular cases.

These changing terms have widened greatly the range of eligible house buyers. This can easily be seen by considering the changes in availability of our $8,500 house under the existing government programs in contrast to previous market terms.

The changes in the down payment requirements or amount of equity necessary to purchase a home have been sharpest of all. Prior to the FHA, most lenders limited first mortgage loans to a maximum of two-thirds of value. This could be expanded by the use of junior liens, but even so a family desiring to purchase a home would usually have to raise in cash at least 20 per cent of the value of the house, and frequently more. For an $8,500 house, this meant a cash requirement of between $1,700 and $2,900. Under government programs this has been reduced to $155 or less above a VA-guaranteed loan, to between $950 and $1,850 (depending on type) above an FHA insured loan, and from this amount to $3,000 in cash on a conventional loan.

The expanding effect of these changes on the private housing market is obvious. If only a token down payment is needed, this requirement bars no one from the housing market. On the other hand, if we consider as the potential private market the top 80 per cent of the income range, a $2,900 down payment requirement will exceed the accumulated or available savings of over two-thirds of prospective buyers.

The effect of changes in the monthly payment to cover interest and amortization has been nearly as striking. They cannot be estimated as accurately, though, because previous information on amortization and interest rates is not complete. In addition, since with smaller down payments the principal is higher, a lower rate of payment is necessary if people are to carry the higher loan. To this extent, lower monthly payments simply reinforce low down payments and do not expand the market. Let us, for purposes of comparison, indicate the size of payments that would be required on an $8,000 debt, with a pregovernment net interest rate of 8 per cent and fifteen years amortization (this includes first and second mortgages), prewar FHA terms of 5 per cent and twenty years, pre-Regulation X VA terms of 4 per cent and thirty years amortization. The monthly payments would be about $77, $53, and $38, respectively.

Let us translate this monthly payment difference of $39 and over 100 per cent into terms of potential buyers and the width of the private housing market. We find that a buyer of an $8,500 house would require $1,800 less income per year with existing terms. Such a reduction in required income allows about one-third of all families to enter the private housing market. These families would not, under previous terms, have been a part of the effective market.

A note should be introduced here repeating the often neglected warnings of many economists that since changes in credit affect demand, improvement in terms does not necessarily result in an equivalent reduction in payments. A change in the rate of payment can be capitalized into the initial price. If this occurs, the monthly payment could be as large and the total amount paid could be larger under easier as compared to more stringent terms.

The tendency of the housing market to capitalize reductions in terms has frequently been commented upon. This occurs when reductions take place in a period of inelastic supply so that the increased demand brought about by the easier credit causes a price rise rather than an increase in output. This has been the basis of several statements to the effect that easy home-financing credit has contributed to the large postwar rise in housing prices. As an example, last summer when financing terms shifted from FHA at 5 per cent to G.I. at 4 per cent, several builders are said to have kept the same schedule of monthly payments while raising the prices of their houses.

This is not, of course, a necessary result. If supply is elastic, the increased demand can be met with only slight price rises. In addition, the government's influence over prices is considerable. The appraisals of both the Veterans Administration and the FHA are prime factors affecting prices. While most observers believe the VA failed to use its power properly, this is commonly attributed to inexperience and poor administration rather than inherent weakness.

Incomes and Payment Income Ratios. Since the ability to purchase a house results from a relationship between costs and expenditures, the market can be expanded through either side of the scissors. If as a result of government programs more men are fully employed, the potential private housing market has been expanded. Similarly, the higher the income of the lowest paid family heads, the more money is available for shelter expenditure.

Just as larger incomes can increase the market, so can expansion result from a greater percentage of income going to shelter. Very little analysis has been done of the rationale of any particular income-mortgage payment ratio. Widely quoted rules of thumb indicate that a family should be willing to pay out either 20 or 25 per cent of its income to cover its monthly payment on interest, amortization, insurance, and taxes. Both of the main government programs use 25 per cent as an approximate maximum. This maximum is apparently based on the assumption that even if a consumer desires to spend more than 25 per cent on housing, he is not a good credit risk.

In a study of actual payments, variety is the most striking characteristic. For example, FHA data show that while people with incomes in the vicinity of $2,500 per year pay on the average somewhat over 20 per cent of their income for their monthly mortgage payment, the quartile deviation of payments is about 15 per cent of the median. This means that between the first and third quartiles the amount that families allocate to shelter varies by almost 7 per cent of their total income.

It appears difficult to set any proper income-expenditure ratio on purely economic grounds. In families with very low incomes, a maximum shelter expenditure might be set on welfare grounds based on the assumption that any amount above this maximum would cut down on other necessities. As incomes rise, however, the consumer can determine the quality of housing desired compared to other goods by adjusting his expenditures in accordance with his preferences. Thus the market may be expanded by consumers increasing their preference for housing and raising the percentage of income allocated for this purpose.

We estimated initially that families could allocate 25 per cent of their income to their monthly housing payment. If this is reduced to 20 per cent, it would increase the annual income necessary to buy an $8,500 house by about $550 and would keep about 10 per cent of otherwise eligible buyers from the market. Any families in the $2,000 to $3,000 income range not preferring or not able to allocate this 25 per cent might not receive adequate housing.

III

The previous section has shown how government programs have expanded the private housing market. Let us now consider the final point: the urgent requirement that these programs be formed into a clear, sensible, and understandable public policy to replace the present amorphous mass of conflicting methods and goals. Existing programs form the backbone of the housing market. Because of failure to recognize this and sometimes because of the assumption that public intervention is still temporary and superficial, these programs have received a minimum of analysis. As a result their effectiveness has suffered.

Let us take as a simple example the effect of low down payments and long amortization on owners and the government. In reality, liberal terms change the whole concept of tenure. They may make it worth while for the owner to buy but still to handle his house as a leasehold profiting from prosperous times, with the government assuming the risks of deflation.

Effect on Owner of New Terms. Easy terms have been criticized by both liberal and conservative economists who believe that low terms were adopted as an emergency measure and should have been removed as soon as possible. They might consider Regulation X simply as a first step back toward soundness. Some of these critics argue that, because in reality it is cheaper to rent than to buy, shorter terms are preferable for the owner since lenient terms delude him into buying against

IV. *Conclusions*

I have indicated my belief that existing government programs have done a great deal toward meeting the housing problem. In fact, while the costs of this policy will have to be determined and related to its value, if terms of no or low down payments, thirty-year amortization, and 4 per cent interest were available to all, the general problem of employed families unable to afford adequate housing would be solved. However, specific problems in particular localities and with respect to minority groups, as well as other flaws in the housing market such as lack of capacity, poor planning, and cycles of demand, which I have not discussed in this paper, would still exist. This solution of even the primary income-cost problem remains only potential until the existing programs are co-ordinated, clarified, and rationalized. The present programs have glaring inconsistencies and are frequently chaotic.

While in accordance with the original topic for these meetings my main stress has been on the long-run effects of the government's programs, it is clear that if we are now embarked upon an extended period of mobilization there is an increased need to rethink and reorganize our policy. The government's credit policy, which has been preponderant in the normal market, will of necessity play as large or larger a part in mobilization. Its results will no longer simply widen the market, but depending on differences in terms, will act both to control the amount of construction and to ration it among groups.

Regulation X has brought about some co-ordination—although far less than is indicated on the surface—among the several programs. At the same time, it has sharply focused attention on this whole problem. Perhaps it may furnish the impetus to accomplish part of the needed research.

DISCUSSION

ARTHUR R. UPGREN: I would like to point out at the outset that sometimes single areas of trade and economic activity become so heavily freighted with an overriding public interest that those who have been in control of them must be divested of such control and see it transferred to the public authorities. One such example is the Canadian national interest in newsprint. That interest, in a 300 million dollar source of our dollars, cannot be left to the vagaries of fluctuating exchange rates. It must become the subject of such contracts which guard against sporadic fluctuations and which are full in accord with the wishes of the national authorities.

After our experience this past year (1950), with the housing industry, we find it one that is far too valuable to leave to the housing experts alone. It must be brought under cyclical control. Last spring the terms, on which this enormous "kept industry" sells this product, were cheapened by about 30 per cent. As a result, a family could now buy either 30 per cent more housing for the same monthly drain on the family budget or could buy the same amount of housing for a 30 per cent smaller monthly budgetary deduction. The result was that new housing starts at once increased by about 40 per cent over the level that had been prevailing and over the maximum peak level ever recorded before this change in buying terms. One wonders if co-operative housing financing had been arranged, as was urged by Senator Paul Douglas (former president of the American Economic Association), to provide 3 per cent money and fifty-year terms by national legislation, whether the volume of housing would not have exploded all ceilings imaginable.

What has happened is that we have discovered that by altering the terms on which housing is sold, we are able to influence very substantially the levels of total economic activity. Therefore, housing and its financial terms must be brought completely into budgetary and cyclical focus. It is entirely outside of that focus at present because an alteration by government in its financing terms, like the overcoat in the salesman's expense account, can create an inspired increase in total expenditures without such outlays being contained in the accounts. Such expenditures are not contained in either budgetary-included taxation or borrowing. Compared to the problem of appropriately reflecting this hidden effect on the budget, the preparation of a "cash consolidated budget" is a simple task. What is needed is economic research in this area and most of it will have to be done by the nonhousing experts. Their competence is not denied, but they are usually viewing the trees and ignoring the forest.

Then, too, we certainly need to determine whether or not we really lowered interest rates (that is in real or *in natura* terms) or increased costs of housing by our manipulation of terms and the interest rates. The fact that for several decades the cost of construction has risen about 1½ per cent a year faster than the wholesale price level suggests that the bias may be due to the fact that hamburgers, gasoline, and movie theater admissions are not financed by borrowings, whereas houses are almost universally so financed.

The low interest rates affect the latter commodity but not all the former commodities.

Then, too, further research is needed to show what the price we have paid for expansion in housing has been. That the more favorable terms which caused the housing boom are a form of a subsidy can hardly be denied, but one wonders if the expansion of the tax base thereby did not perhaps produce an enlargement of fiscal receipts of greater value and benefit to the economy than the subsidy paid. If countercyclical policy is obsolete, then this conclusion is important.

Anyone who inspects the possibilities of cyclical decline must come to the conclusion that counterdepression policy must be near obsolete. If it is to be made obsolete, the housing industry is one of our great weapons to that end.

EDWARD E. EDWARDS: At the risk of being called names, I should like to take issue with what I gather to be Mr. Bloomberg's ideas as to the role of the federal government in urban housing. First of all, it is my opinion that an apology or rationalization is necessary for every action taken by our federal government. To defend the actions of our government, as Mr. Bloomberg has done, on the grounds that those who oppose or question them do not believe in democracy is to deny the merits of the democratic process.

The trend of events has brought us to the point where the total job now being done by our federal government is too large for any one organization to do; yet more and more programs are being thought-up, defended, and added to those already in operation. Probably none of these individual programs can properly be held to be bad. Rather, it is the sum total of all of them—the building of a federal colossus, the socialization of our national income, the transference of all decision making to Washington—that we must watch and protect ourselves against. In such circumstances, whatever role the federal government plays in urban housing ought to be one that can be discussed frankly and vigorously defended.

With all the alternatives available to the federal government in the field of urban housing, with the emphasis on recovery that characterized so many of the programs initially and with the inconsistencies that exist and are known to exist in the various programs, we need to know more clearly than we do now just what role the federal government is trying to play. We might profit much from a discussion of some of the federal programs in terms of objectives and results, but our speaker has discouraged this when he implies that anyone whose opinion may differ from his is one of the "intellectual or economic elite who do not believe that the people can, in wisdom, decide for themselves."

Mr. Maisel, who from his remarks would appear to have no serious objection to federal participation in the field of urban housing, fully recognizes and freely admits the inconsistencies, the apparent absence of a basic policy, and the other defects in the federal housing programs. His paper therefore provides for and encourages discussion.

My comments will not be extensive. I do wish to raise a few questions and to make a few observations. First, is it desirable that every family—or even a majority—be able to buy a new home? Is it not much more important in the long-run that the increases in our housing supply be well located, well planned, and well constructed? If so, are not these objectives lost sight of when we direct our construction into cheap housing, whether private or public?

Second, to what extent has our present situation resulted from an important federal program not defended by Mr. Bloomberg—rent control. The federal housing programs appear to be an irrational way of rationing dwelling space. The returning G.I. could not compete for a place to live in the rental market since under rent control that space had already been allocated to someone who did not have to leave home. So the federal government attempts to channel new construction into low-cost homes for veterans, and offers G.I. loans with no down payment and terms that seem like rent.

I am not suggesting what should have been done, but I do point out that the G.I. program was in part a solution to the problem of finding a place for the veteran to live—a problem which was in part created by rent control. In other words, I agree with Mr. Maisel that federal programs are likely to create as many housing problems as they solve.

A third point is that we know all too little about the nature of the demand for houses, and especially the effects of credit and credit terms on demand. It is not improbable that the easy credit policies of the federal government have made housing more scarce rather than more plentiful by stepping up the demand more sharply than the construction industry could possibly add to the supply. It is so easy to forget the first principle of real estate economics; namely, that the supply of real estate is relatively fixed.

A final point, with reference to Mr. Maisel's discussion of the ratios of housing costs to family incomes. Housing as we know it today is essentially a luxury good. How much a family is willing to spend for housing, both in actual amount and in percentage of its income, should be expected to vary widely, both over time and between families at any given time.

RAYMOND J. SAULNIER: In view of the wide and rapidly expanding scope of federal activities in the field of home construction and financing, it is important that the most careful attention be given to the impact of governmental policies in this area. Mr. Bloomberg speaks somewhat critically in his paper of certain predictions made in the early thirties to the effect that governmental policy in the home financing field might lead to a virtual regimentation of private activities. Without presuming to appraise in a word the full extent of governmental influence in real estate markets, I think it is correct to say that the influence of government is now felt as a dominating force at all points in the home construction and home financing markets. Though I would gather from Mr. Bloomberg's paper that he is inclined to be impatient, if not downright hostile, to any attempt to appraise the influence of governmental housing policy, that is precisely what I propose to do, however inadequately, in the few minutes available to me, and I am constrained to add that I regard this as in no way contrary to responsible citizenship.

There are many points of view from which one might appraise governmental housing policy, but it is the unique purpose of this meeting to examine

ECONOMICS OF MEDICAL CARE:
I. THE PROBLEM

PERSPECTIVE ON THE ECONOMICS OF MEDICAL CARE

By Eli Ginzberg
Columbia University

I would like to begin these remarks by calling attention to the fact that a program on medical care under the auspices of the American Economic Association is worthy of note. I have not taken the time to check the records of all of the meetings held under the auspices of our Association but, relying on my memory, I would say that this is the first time during the past two decades that such a session has been held.

There might be some point in speculating about the reasons why the subject of medical care has found its way into this year's program; and further, about some of the implications that we might draw from this fact. I suppose that if I were enamoured of a psycho-analytical interpretation of social phenomena, I would look for some member of the Program Committee who had recently encountered serious illness and had become aware of the problem by way of the medical bills that he had to meet. This explanation may not be far from the mark, but there is surely a nearer one.

During the past several years, large and vocal groups of American citizens have been taking sides on the question of the best methods to enable the lower- and middle-income groups to pay for medical services. There is a mounting public concern with the economics of medical care. Since our program affords a special place for "problem fields," it is clearly appropriate for us to devote a session to the economics of medical care.

There is another point about a session on medical care on a program of, by, and for economists. As economists we are faced with a serious handicap when we seek to analyze and appraise the structure and functioning of professional services about which we have, at best, a nonprofessional understanding. However, for many years doctors and other members of the health professions have hardly hesitated to discuss at length the economic factors determining the demand for and the supply of medical resources and services.

The fact that medical experts have long concerned themselves with economics and the further fact that economists are now becoming interested in assessing the cost and adequacy of medical services, suggests that two bodies of knowledge must be comprehended if effective social policy is to be evolved. But if this is true, it behooves each group of experts to remember the limitation under which they operate—limitations which grow out of the fact that they are experts in only one field, not in both. For this reason, it would seem the better part of wisdom for each expert to be cautious and modest in his approach, for his knowledge is partial, not total. It is disturbing, to say the least, to find distinguished members of the medical profession warning the public that certain adjustments in the means of payment for medical care will bring about a socialist state; and it is equally disturbing to hear economists explain without any hesitation how the cost of medical services could be reduced if steps were taken to organize medical practice so that it would be possible for the public to gain the advantages which come from a larger volume and a lower overhead cost per unit.

Since the other speakers on this program have assignments which will lead them to discuss various technical aspects of the economics of medical care, I will concentrate on general considerations. I would like to begin by indicating that the title of these sessions, particularly the emphasis on the term medical care, if narrowly defined to include only the art of healing, may reflect that we have set the problem in terms of yesterday's formulation rather than tomorrow's. What we are really concerned about is the broadest possible concept of health services rather than the narrow approach of therapeutic medicine. Nor is this distinction a minor point in semantics. It is a matter of great importance for a person to be able to secure adequate medical care in time of need; but it is a matter of still greater importance that he be able through effective preventive services and other methods to safeguard his health.

Advances in medicine, preventive and therapeutic, have proceeded at such an amazing pace that it is difficult to gain perspective on what is essential and what is nonessential about this progress. We now think of the hospital as the most important institution in the health field, but it is well to recall that as late as 1890, it was the better part of wisdom for a sick person to stay out of the hospital if he could possibly afford to do so, so great were the dangers of cross-infection. We may be on the verge of a trend that will tend to reduce the importance of the hospital in the future, at least for the treatment of inpatients. There are psychiatrically oriented doctors who feel that on balance it may be desirable to deliver certain women at home. More important, all the experts in the care of the chronically ill look forward to an intensified development of home-care programs in urban areas which will reduce the numbers treated in hospitals.

Another illustration of the rapidity of medical progress is the statement of the late Dr. Henderson, of Harvard, who was fond of pointing out that as late as 1910 a person with an undiagnosed condition who was treated by an average physician had only a fifty-fifty chance of benefiting from the encounter.

Although the great advances in medicine have been grounded in advances in the basic sciences, there has remained, even in this most scientific era, much of the nonscientific and the faddish in the art of medicine. Earlier in the century, it was fashionable to remove the ovaries of many middle-aged women; somewhat later almost every child had his tonsils extracted. After World War I, mothers were admonished to feed their babies according to the clock, not a minute before nor a minute after the scheduled time. More recently, the exact opposite advice was being furnished by the country's leading pediatricians—the baby was to be fed on demand. Earlier in the century, institutions for mental patients were constructed in out-of-way places on the assumption that mental disease was not amenable to therapy. Today there are many reputable psychiatrists who are seeking to convince the public that their specialty cannot only cure the individual, but the nation and the world.

Clearly, we have great need to distinguish the essential from the peripheral—the constructive from the faddish. In the current debate about what the American public should do to improve its health services, major emphasis is being placed upon the need for more doctors, more nurses, more hospitals—for a larger number of trained personnel and specialized resources devoted to therapeutic medicine. Relatively little is said about the less spectacular but surely equally, if not more, important potential contributions that an expansion of preventive medicine and economic well-being can make to the health of the nation. In analyzing the sizable expenditures of the federal government for hospitalization and medical care, the Hoover Commission discovered that all but 15 per cent of the annual total of more than one billion dollars was spent on direct patient care. Preventive services, education, research, training were allotted only one-seventh of the total while the curative services received the rest.

Yet the greatest gains in health have come, in the first instance, from immunization and environmental sanitation. Although the claim is frequently made that the medical profession has added, not years, but decades, to the life of man, this is a misleading statistical generalization. What has happened is that we have made tremendous gains in reducing infant and child mortality, with a concomitant great increase in life expectancy at birth. But there has been little change in the life expectancy of the young person who reaches his twentieth year. There may be significant gains in the offing, but to date only small gains have been registered.

Some indication of the importance of environmental sanitation can be glimpsed from the fact that when the water supply of the city of Philadelphia was properly guarded shortly after the turn of this century, there was a most striking reduction in the number of hospitalized persons. Previously every hospital had had one or two wards of patients suffering from typhoid fever. Shortly after the improvements were put into effect this disease virtually disappeared. The eradiction of malaria and hookworm in the Southern states is an even more striking example of the importance of environmental sanitation.

One more illustration. During the Spanish-American War, our manpower losses from disease reached the appalling height of 34 deaths per 1,000 troop strength per year. The present Surgeon General of the Army, on the basis of an extended visit to Korea in September, reported that there were no cases of American soldiers with smallpox, typhoid fever, typhus, cholera, or other dread diseases which are more or less endemic in that part of the world.

The importance of advances in preventive medicine and environmental sanitation upon the health of the community has been underestimated, but the significance of the standard of living has been almost totally overlooked. It is questionable whether any factors are more important in establishing the preconditions for health and for its maintenance than housing, food, education, and employment.

I had the opportunity recently to testify before a Congressional committee on a proposal, growing out of the work of the Hoover Commission, aimed at unifying the federal hospitals which are currently operated by several independent agencies. In my testimony, I pointed out that although the Armed Forces withdrew about 40 per cent of the doctors from civilian practice during World War II, the best available indices of the health of the American public—infant mortality, maternal mortality, and life expectancy—showed a continued improvement. This seemed like a statistical sleight of hand to the committee until one member ventured the opinion that possibly the health of the public had improved because people eat less during a war. I took the occasion to point out that just the opposite formulation might be closer to the truth—that the public was able to get on with fewer doctors because so many in the lower-income groups had more to eat, more work to do, and better morale—factors that materially influence health.

No one who has ever had an opportunity to study in some detail the conditions of life of the unemployed or the chronically ill will question the significance of the loss of work on health. Nor is this influence exerted solely on emotional health, for we have learned during the past years of the very close relation that exists between the psyche and the soma. Now that we are face to face with a partial, if not total, mobilization, it may be well to point out that during World War II approximately two million men were rejected for military service because of mental or emotional shortcomings, and another three-quarters of a million had to be separated from the service for the same causes. These were men adjudged to be unsuited to meet the demands of military life, although only a small percentage of them were suffering from a specific disease.

One might gain the impression from the drift of my remarks up to this point that I am contending that health is primarily a function of effective preventive services and a high standard of living; and that what we usually define as the essence of health services—doctors, hospitals, nurses, and specialized equipment—have at best a minor role to play. Obviously this is not my intent. But I think it important to establish an adequate framework for my point of view. I have a deep-seated conviction that we are currently overemphasizing the potentialities of curative medicine to the neglect of the constructive influence of preventive services and economic well-being on health.

The real danger that flows from an overemphasis on curative medicine is the allocation of a disproportionate amount of resources to this area—disproportionate when appraised in terms of the advantages of an alternative use of these resources for preventive or social services. In various parts of the country—and I can speak specifically of New York State—considerable funds are spent annually on the operation of hospitals for tuberculosis patients. Additional funds are frequently sought for the erection of more hospital beds for these patients. Much less effort is devoted to case-finding, to detecting and treating patients at an early stage of the disease; and only picayune efforts are made to rehabilitating the patient after his tuberculosis has been arrested. Hence, many suffer a relapse after they leave the hospital. In this connection it is worth noting that it costs approximately $13,000 to construct a hospital bed and $12.00 to $15.00 per day to operate. One of the major contributing factors to the spread of tuberculosis is living in overcrowded conditions. Adequate living quarters can still be built at a cost of approximately $10,000 per family unit or $2,500 per person, which is only about one-fifth the cost of a hospital bed.

To complicate matters, we have a surplus of standards to guide public action. Few planners distinguish clearly between minimum, adequate, and desirable. Moreover, their estimates are frequently based on the crudest assumptions. Various federal agencies have calculated that the country requires an almost astronomical increase in hospital beds, and an almost equally large increase in medical personnel. These so-called "requirements" are put forward without adequate study of the feasibility of staffing or supporting the expanded resources. The U. S. Public Health Service is beginning to recognize the dangers of encouraging the building of a large number of very small hospitals which can never be properly staffed; and I hope that before too long someone will recognize the dangers of having poorly trained doctors.

It would be foolish to deny that there are many sections of the country that have an insufficiency of medical resources and personnel to provide for a minimum, much less an adequate or desirable, standard of care. But it is important to recognize that it is no easy matter to overcome these serious deficiencies, even with large-scale assistance from the federal government. There remains a very close and intimate connection between a regional culture, its economic and social base, and the type of health services that it is able or willing to support. In New York State, the Legislature, seeking to encourage the smaller rural communities to build hospitals, has for years had a most liberal standing offer of aid, not only for construction, but for operation. But county after county that is eligible refuses the bait. The citizens prefer to cover their hospital needs by continuing to travel to a neighboring county.

You will probably hear much about the advantages and limitations of various types of medical prepayment plans, including compulsory government insurance, from the other speakers at these sessions. I am sure that someone will put forward the claim that most, if not all, of the current problems facing the nation on the health front could be solved if we established a sound basis for the payment of medical care. The problem of payment is serious. I spent more than a year studying just one phase of it—hospital finances—in New York State. But I would be the first to warn against the naïve belief that alteration in the present methods of payment, even such a major change as the institution of compulsory government insurance, would contribute materially to the solution of the vast numbers of problems which are involved in raising the health standards of various sections of the country. Just one reference in this connection. The radical alteration in the pattern of medical care instituted by the British when they established their National Health Service has contributed much more to the reallocation of existing resources than to meeting the fundamental challenge to increase the total quantity and quality of the resources. Nor have all of the short-run reallocations been for the good. Notoriously weak preventive services have been further weakened when doctors responded to the superior financial advantages in curative medicine.

Since the level of health services and medical care must always be closely adjusted to the cultural, social, and economic pattern of life of the region, objectives and priorities must be sectional and local rather than national in a country as large and as diversified as the United States. The first step in raising the standards of health and medical care in the state of New York—or, to sharpen the illustration, in the city of New York—would have little pertinence for meeting the needs of Butte, Montana, or an agricultural county in Arkansas. For this reason I think that much more mischief than good comes out of the claims frequently put forward by professional leaders that their specialty, be it psychiatry or rehabilitation or any other of the "shortage areas," requires tens of thousands of additional personnel to meet its minimum requirements. What the public needs to guide its actions intelligently are not impractical and dubious objectives but intelligent and realistic priorities.

The essence of my contention is simply this. There are a great many objectives which must be accomplished if the people of the United States are to enjoy a better life through better health. But the priority among these objectives must be adjusted to state and local conditions. This is not to deny that federal action is also necessary and desirable. In deciding upon the objectives and in establishing essential priorities, reliance must be placed on two principles. First, an effort must be made to view health in the broadest possible context and to realize that additional resources should be made available in a manner that will enable the community to get the most for each additional dollar. In one area this may be through the building of a specialized hospital; in another, through the establishment of a county health service; in a third, through slum clearance. The second principle involves the recognition that all instrumentalities that can contribute to progress must be brought into play, from the individual to the federal government. I fear that we frequently overlook not only the relation between the individual's economic position and his health but the relation between his education and general understanding and his health. Beyond the individual, there are a host of important professional, business, and voluntary groups—all of which have a significant part to play in a total health program. Moreover, the essential elements of a successful program require that each group, acting individually and co-operatively, meet its responsibilities.

First, there is the problem of securing an adequate number of properly trained personnel, not only doctors, but public health experts, dentists, nurses, and technicians. Many informed persons question whether our medical schools are today admitting just the right number of qualified students and are educating them in the most effective manner. Priority consideration should therefore be given to the educational reform of and financial support for our medical schools.

We need guidance on how to improve the quantity and quality of our hospital facilities, not only for the patients customarily treated in these specialized institutions, but for the still larger numbers of outpatients who could profit from a reorganized pattern of care. Nonprofit and profit organizations that are currently engaged in selling medical prepayment policies should explore methods to increase the numbers who are covered and the quality of the coverage that they offer. Government at every level—local, state, and federal—should establish priorities for expansion in preventive services, specialized hospitals, education, or research. And to the extent that other groups fail to meet their responsibilities, government must be ready to step into the breach.

I have probably covered too much, too hastily. But I have wanted to point to the major guideposts rather than to the bypaths. And so in conclusion, I would like to summarize what I believe to be the principal points of this discussion. Health involves much more than the provision of adequate medical care, though medical care obviously has an important part to play in the establishment and in the maintenance of effective health. It is an error, particularly for social scientists, to think of health as an entity separate and distinct from the other essential determinants of life—food, housing, education, work. Second, the greatest contribution can probably be made by the expansion of preventive services based on advances in research, in the basic and the applied sciences. Third, efforts to improve the nation's health must take into consideration the great diversity in the patterns of life which typifies our country. This warns us to beware of simple solutions which claim that all problems will be solved by the adoption of a particular approach. Fourth, we must keep in mind the fact that health cannot be provided by any one agency, not even by the federal government, but requires the continued effort of the great galaxy of institutions which compose a modern society, from the individual himself to the highest organ of government.

And, finally, we must always bear in mind that we are dealing with a highly dynamic problem in which today's objectives and priorities become tomorrow's antiquated practices. Health, like happiness, is an objective always to be sought, even if it can never be fully attained.

Bibliographical Note: A more detailed treatment of various viewpoints expressed in the text can be found in the following studies in various aspects of medical economics and related problems that I have had under way during the past several years.

The Unemployed: I—Interpretation. II—Case Studies (Harper & Brothers, 1943).
A Program for the Nursing Profession (Macmillan Company, 1948).

A Pattern for Hospital Care (Columbia University Press, 1949).
"The Economics of Caring for Patients with Chronic Disease," *Social Welfare Forum 1950* (Columbia University Press, 1950), pp. 155 ff.
"Public Health and The Public," *Tomorrow's Horizon in Public Health* (Milbank Memorial Fund, 1951).
"Federal Hospitalization: I—The Setting; II—Current Trends; III—The Problem Today," *Modern Hospital,* April, August, and December, 1949.
"Statement and Letter of Eli Ginzberg," *United Medical Administration,* H.R. 5182, 81st Cong., 2nd sess. (Government Printing Office, 1950), pp. 107 ff., 211 ff.
"Economics of the Hospital System," *Proceedings of the Annual Congress on Medical Education and Licensure* (Chicago), February 7 and 8, 1949.
"British Planning for Health and Welfare," *Modern Hospital,* May, 1950.
"Tomorrow's Psychiatrist," *Menninger Clinic Bulletin,* March, 1945.
"Notes on American Psychiatry by a Social Scientist," *American Journal of Psychiatry,* June, 1950.

MAJOR AREAS OF ACHIEVEMENT AND DEFICIENCY

By Franz Goldmann
Harvard University School of Public Health

I

In recent years all the old-established programs of medical care for civilians have been revised and improved and many new ones have been established and rapidly expanded in the United States. These programs were born of no theorist's dream. They were forced into being by "the hard logic of events"—the rapid advance of scientific medicine and the profound socioeconomic changes resulting from the technological revolution. Their very existence testifies to society's willingness to adapt medicine and the related professions to social needs and uses through comprehensive service programs meeting high standards.

At present numerous and diverse programs of medical care are in operation, and many community health organizations include provision of medical care in their activities to a widely varying extent. Essentially, these services may be classified in three broad categories: (1) public medical care, financed out of general tax funds and administered by public agencies; (2) voluntary medical care insurance, financed through earmarked regular prepayments by subscribers only, employers only, or employees and employers jointly, and administered by voluntary organizations; and (3) social insurance, financed mainly by "premiums" paid by employers and supervised, and in some instances also directly administered, by public agencies.

The programs classified as public medical care comprise a large number and great variety of fundamentally different programs. One type is designed for medical care of individuals belonging to certain socioeconomic groups, including the veterans, merchant seamen, medically needy, recipients of public assistance, and various smaller groups. Another type provides for medical care as part of efforts to control certain diseases of socioeconomic importance, such as communicable diseases, psychiatric disorders, physical handicaps, dental diseases, malignant tumors, and others.

The voluntary medical care insurance plans include straight cash indemnity plans, service plans, and "combination plans." The cash indemnity plans allow stipulated sums of money up to a certain maximum toward the insured's expenses for specified professional services, hospital care, or both. They are sponsored by commercial companies and also by a number of nonprofit associations. The service plans provide their members with specified professional services, hospital services, or both, and usually are operated by nonprofit associations.

Both service and indemnification are offered under different contracts by many organizations.

The principal type of social insurance providing for medical care is known as workmen's compensation. The pertinent laws protect industrial workers against the economic risks of occupational accidents and diseases through the provision of both medical care and compensation for loss of income due to disability or death. In addition, the state of California in 1949 has introduced compulsory insurance against the cost of hospitalization for all workers covered by unemployment insurance.

II

In 1949, the total national expenditures for medical care of civilians amounted to about 10.6 billion dollars, or $70 per person, in contrast to about 3.6 billion, or $30 per person, in 1929. These expenditures represented 4.9 per cent of the national income in 1949 against 4.4 per cent in 1929.

In the last twenty years both the general tax funds spent for medical care of civilians and the funds raised through the method of insurance for this purpose have multiplied and come to constitute a steadily growing proportion of the total national expenditures for medical care of civilians. In 1949 the general tax funds allotted amounted to about 2.5 billion dollars and constituted about one-fourth of all national expenditures for medical care, in contrast to about 500 million, or approximately one-seventh of all pertinent expenditures, in 1929. Twenty years ago the method of insurance was employed for the financing of medical care on a very limited scale only, mainly under workmen's compensation laws, and the total amount of money expended by insurance organizations represented an infinitesimal fraction of all national expenditures for medical care. Since that time the picture has changed considerably. In 1949, about 700 million dollars was paid by commercial companies and nonprofit voluntary plans offering insurance against specified costs of medical care; these payments accounted for about 6½ per cent of all national expenditures for medical care of civilians and for approximately 11 per cent of all private expenditures for this purpose. The payments for medical care of employed persons covered by workmen's compensation were estimated at close to 200 million dollars, against some 70 million in 1929.

III

Recognizing the interdependence of an effective "service organization" and an effective "payment organization," public as well as voluntary agencies responsible for medical care programs have taken various step to assure the availability of services by members of the health professions and by clinics, hospitals, and related institutions.

Physicians and members of related professions in independent private practice have come to be widely utilized by both official and voluntary agencies, and their participation in organized programs has been formalized in many instances. Noteworthy is the tendency to substitute collective agreements negotiated between professional associations and administrative agencies for the old policy of making individual contracts with some physicians, dentists, and others and to make orderly arrangements for the compensation of participating private practitioners. Simultaneously, full-time hospital staffs have been used increasingly to render service to both inpatients and outpatients covered by certain programs. The co-ordination of their activities with those of physicians and dentists in private practice has received growing attention and been achieved by some programs, especially that for war veterans. In an effort to foster teamwork in rendering comprehensive service of high quality, group practice organizations have been developed primarily outside of hospitals and, lately, also more frequently within hospitals, where the idea was originally tried out. Under such a system a smaller or larger number of physicians and members of related professions work together in systematic association, using a medical center as headquarters.

At present the large majority of all physicians and dentists rendering direct service under organized programs of medical care are private practitioners in individual practice who are compensated for their services on the basis of the fee-for-service method, the part-time salary system, or the flat-rate method, in this order of frequency. The minority hold full-time salaried positions with hospitals, primarily governmental and less frequently nongovernmental hospitals, or with voluntary organizations, mainly nonprofit associations sponsoring voluntary medical care insurance plans and occasionally industrial companies supporting medical care programs for their employees or the employees and their family dependents.

For hospitalization some public agencies operating medical care programs use almost exclusively governmental hospitals; that is, hospitals built and operated by city, county, state, or federal agencies. Others avail themselves of their own hospitals preferentially and of nongovernmental hospitals to some extent. Still others rely entirely on nonprofit voluntary hospitals, proprietary hospitals, or both, owing to the absence of governmental institutions in their area. In contrast to earlier times, public agencies have shown a tendency to pay participating nongovernmental hospitals on the basis of actual cost per patient day and to conclude with them more or less formal agreements defining the obligations and rights of both parties. Of the voluntary agencies administering medical care programs, the large majority permit their members use of any hospital, regardless of auspices, or only of those accepted for participation, and a small number, especially nonprofit associations in rural areas and some large industrial companies, are maintaining their own hospitals. As a rule the nonprofit plans operate on the basis of contractual agreements with both subscribers and co-operating hospitals and make direct payments to the hospitals for services covered by the contracts. Most of the commercial companies have no formal understandings with hospitals but some have recently begun to pay the allowed amounts of indemnification directly to the hospitals rather than to the policyholders.

IV

At the end of 1949, programs of public medical care were available to more than 25 million persons, voluntary medical care insurance plans to about 66 million persons, and social insurance programs to close to 40 million persons. These figures denote eligibility and must not be added up for the purpose of determining the total population served. A very large proportion of these people are protected by different programs for different health conditions to a different degree. The extent of these duplications, or triplications, is not reliably known, but there are good reasons to assume that workers covered by workmen's compensation laws constitute a very substantial fraction of those enrolled in voluntary medical care insurance plans, that there are considerable duplications among the persons enrolled in various types of voluntary insurance plans, and that many of those entitled to public medical care also have some kind of insurance against cost of medical care.

In the aggregate, the persons eligible for service under one program, or two or more combined, constitute more than half the civilian population. The increase in coverage during the period 1930-50 is extraordinary. But the test of the value of medical care programs is the degree of protection afforded and the quality of service rendered rather than the number of persons covered. A scientific appraisal of the existing programs must determine the type of health conditions covered; the type, scope, amount, and period of provisions offered; and the quantity and quality of service actually rendered. The medical care received must be measured against the standards of adequacy set by the professions involved, taught by the leaders in the field, and met by the most advanced organizations.

The provisions for the war veterans apply to any service-connected disability, without restrictions, and, in addition, to nonservice-connected disabilities, diseases, or defects requiring hospitalization, provided that the veteran "is unable to defray the necessary expenses therefor." Each of the numerous specialized public programs for the control of diseases of socioeconomic importance is strictly limited to one group of diseases or defects. The general programs of public medical care for recipients of public assistance and the "medically needy" (defined as persons able to maintain themselves but unable to pay the full cost of the services needed) rely on the specialized programs for the control of certain diseases in cases falling within the province of such programs. With this qualification, some—probably the minority—extend their provisions to any type of illness regardless of stage, and others confine their activities to acute conditions requiring general hospital care and to prolonged illness requiring institutional care of the custodial type.

The voluntary medical care insurance plans furnish service or indemnification in the event of nonoccupational illness and accident and, often, also of maternity. Almost all list a widely varying number of health conditions barring applicants from acceptance or excluding members from prepaid service completely or partly. The large majority are limited to narrowly circumscribed health conditions, and many place restrictions on the amount or period of service in case of specified types of disease.

The provisions for medical care under the workmen's compensation acts in the forty-eight states and similar federal laws covering employees outside the jurisdiction of the states apply to occupational accidents as a rule and to a varying number of occupational diseases in the majority of all instances.

In type, scope, amount, and period of provisions the existing programs differ greatly. A large proportion of the people covered, probably one out of two, are eligible for cash benefits only if stricken by nonoccupational disease or injured by a nonoccupational accident. As a general rule the indemnification is subject to limitations on the total amounts allowed for specified types of expenses, on the number of reimbursable services, the period of payment per case of illness or per year, and the total sum allowed during a period of disability or in the course of a year. Of the programs furnishing direct service, the minority provide all the essential professional and institutional services in the amount and for the period required; others are limited to one type, such as hospital care, or one group of professional services, such as those for hospitalized patients. Still others impose restrictions on the period for which medical care is furnished, the amount of service, or both.

Accurate information on the quantity and quality of medical care actually received by the people eligible for service is available for a few programs only. Noteworthy for their achievements in rendering service of qualitative as well as quantitative adequacy are the program of the Veterans Administration, the crippled children's programs in most of the states, a small number of group-practice prepayment plans, and the programs for students at a few universities. Other programs—especially the voluntary insurance plans for hospital care known as "Blue Cross" plans—have made great strides toward the goal of furnishing quantitatively sufficient care in general hospitals for participants with acute conditions. The programs for the recipients of public assistance provide certain types of service or a limited money allowance to anywhere from less than 10 per cent to more than 40 per cent of those accepted for public aid. Outside large cities the provisions for this group consist primarily of hospitalization and care in institutions of the custodial type, with home care by physicians, nurses, and others, office care by physicians and dentists, and clinic care playing a minor role. All evidence points to the conclusion that the total services received by recipients of public assistance in the large majority of all communities fall far short of both quantitative and qualitative standards, and that hospitalization is often provided more frequently and for longer periods of time than medically necessary, due to either the poor socioeconomic and environmental conditions of the sick or the absence of other equally effective and less costly health services.

Almost all programs are limited in scope, amount, and duration of service or cash benefits, in application to type or stage of illness or accident, or in both. Comprehensive medical care, including preventive services as well as treatment and applied to any health condition, is furnished to a few million persons only, and then under several administratively separated programs. Compared with the meager provisions available in 1930, the services and cash benefits supplied by the various programs in 1950 constitute a very great improvement. Compared with accepted standards of quantitative and qualitative adequacy, they are deficient in most instances. Moreover, a large proportion of the population, especially people in rural areas and those in the lowest income groups, are neither covered by insurance programs nor protected by public medical care except in case of certain diseases.

V

Although remarkable progress has been made in social organization of medical care, further substantial improvements in both "service organization" and "payment organization" are imperative, if the generally accepted objectives are to be attained. All evidence points to the conclusion that determined efforts must be made to prevent disease which can be prevented; to decrease the frequency of serious acute illness, complications, and chronic illness by early diagnosis and prompt and thorough treatment; to ease the financial burden of sickness for the individual and family; and to reduce the staggering losses to the national economy from premature death, temporary and permanent disability, and expenses for medical treatment and vocational rehabilitation.

The present major types of programs—public medical care, voluntary medical care insurance, and social insurance—constitute a hodgepodge of measures vastly differing in eligibility requirements, type, scope, amount and period of provisions, and administrative organization. Obviously, the immediate task is to round out and co-ordinate existing programs that have proved their value. This requires, first of all, decisions on the basic policies to be followed in moving toward the near-term goal. Among the many issues to be settled the following appear to be of paramount importance. Should medical care programs, regardless of auspices, provide for comprehensive service in health and sickness or for protection against the cost of specified services to the sick through payment of limited cash benefits? Should organized programs, no matter how they are financed, be designed for use by the whole population or by certain socioeconomic groups only? To what extent should government participate in the organization of medical care programs through permissive or mandatory legislation, establishment and operation of programs of public medical care, financial aid to voluntary organizations, and use of tax funds to pay for services rendered by professional persons in private practice, voluntary hospitals, and voluntary health agencies? Should the funds necessary for the support of medical care programs be obtained primarily from general tax revenues, primarily through the device of compulsory insurance, or through combination of taxation and voluntary insurance? In the latter case, to what extent and under what conditions should general tax funds be allotted for the purpose of subsidizing nonprofit voluntary insurance plans directly or indirectly? Is it wise public policy to rely on the "categorical approach" by establishing more and more tax-supported programs, one set designed for medical care of individuals belonging to certain socioeconomic groups and another set providing for medical care as part of efforts to control certain diseases of socioeconomic importance?

These are difficult questions to answer. They must be discussed without resort to catchwords. Slogans do not solve social problems. They are no substitute for service. What is needed is, first of all, a scientific rather than emotional approach to the solution of the problem, with consideration on the basis of public interest; and, secondly, co-operation of all groups and all governmental and nongovernmental agencies concerned in formulating feasible projects for the future.

REQUIREMENTS FOR PHYSICIANS

By Herbert E. Klarman
Hospital Council of Greater New York

I. *Need as a Standard for Requirements*

In the field of medical care, a shortage in personnel or in facilities is conceived of as the difference between the numbers available to render service and the numbers needed. The use of need as the standard of adequacy is common to all discussions of medical care, both technical and popular, and is adhered to with remarkable consistency.

Why is need the accepted standard in medical care when it is, at best, a subordinate concept in other areas of economic activity? I believe that need rather than consumer behavior in the market is the prevailing standard in medical care because by tradition we aim to make medical care of good (or adequate) quality available to all people, regardless of economic status and willingness to pay for it.

Individuals and organizations who frequently differ on other important issues in the field of medical care agree on the desirability of perpetuating this broad aim. For example,[1] the Medical Association of Alameda County, California, has advertised to the effect that "medical care is unlimited to the destitute, to those of reduced means, to everyone." The Association guarantees it to all persons who need it, regardless of ability to pay. "If you need medical care, ask for it."

Professor Leavell, of Harvard, representing the American Public Health Association before a Congressional committee, testified that a major objective is "to make available to the entire population all essential preventive, diagnostic and curative services—people must not be separated from medical care for economic reasons."

In his report to the President, Administrator Ewing said: "We must measure our resources and services against the actual health and medical needs of all the people, without regard for their individual ability to pay."

II. *The "Medical" Approach*

If need is accepted as the standard, how does one measure it? Almost twenty years ago Lee and Jones tried to arrive at a "conservative and reasonable standard which members of the medical professional regard as sufficient and appropriate."[2] They would do this by estimating the probable incidence of injuries and diseases for each age and sex group in the population and the quantity of services required to care for each event.

---

[1] Alameda County advertisements, reprinted in *Hearings on a National Health Program, 1949, Part 2,* before a Subcommittee of the Senate Committee on Labor and Public Welfare, 81st Cong., 1st sess., June, 1949, pp. 880-883; Hugh R. Leavell, *Hearings 1949, Part 2,* p. 566; Oscar A. Ewing, *Nation's Health* (Washington, 1948), p. 7.

[2] Roger I. Lee and Lewis Webster Jones, *The Fundamentals of Good Medical Care* (Chicago, 1933), p. 11.

They found that a "standard population" of 100,000 would require 270,000 physician-hours in a typical year. In turn, this implied a need for 135 physicians.

Lee and Jones did not try to obscure their complete disregard of economic considerations. Lee and Jones stated: "The need for medical care is a medical, not an economic concept. . . . It can be defined only in terms of the physical conditions of the people and the capacities of the science and art of medicine to deal with them."[3]

I question the validity of this approach to the problem of defining need for medical care because I do not see how economic considerations can be disregarded. To allocate resources to medical care is to forego their employment elsewhere. It cannot be contested that for the economy as a whole, as well as for individuals, there are many and diverse uses for income, some of which are just as compelling as medical care. Medical personnel and medical facilities cannot be given an absolute priority under all circumstances.

Nor should they be. Medical care is not by itself a desirable object of consumption; it is useful only insofar as it contributes to better health. The health of a people is more likely to be served by a balanced pattern of expenditures than by the dominance of any single item. Among the items to be considered are nutrition, clothing, housing, education, and recreation. This is not to say that even the pursuit of good health can be acknowledged as an absolute goal.

To express my doubts in another way: would one define medical needs at the same level for a country, such as India, as for the United States? If economic consideration could truly be disregarded, it would, of course, be expected that medical needs for India would be set at least as high as for this country. If that were done, very little would be left for food, shelter, clothing, etc.

Because it is not possible to calculate need in terms of medical criteria exclusively, recent attempts to estimate need have employed past experience as a springboard. Presumably, actual utilization of medical personnel and facilities must be within the permissible bounds set by the economic capacity of a community.

III. *The Need for Physicians*

Usually the need for physicians is estimated on the basis of the ratio of physicians to population that currently prevails at a selected point in an array of states or health service regions.

---

[3] *Ibid.*, p. 111.

The National Health Assembly employed as one of its standards the weighted ratio of physicians to population in the twelve states with the highest individual ratios and arrived at an estimated need for 254,900 physicians in 1960 and a projected shortage of 42,000.[4]

In 1949, Mountin, Pennell, and Berger, of the U. S. Public Health Service, estimated need on the basis of three alternative standards, representing ratios of physicians to population at the 12th, 16th, and 37th health service regions, respectively, in an array of 126 regions. Gross needs, inclusive of retired physicians, are estimated for 1960, as follows: Standard A, 272,000; Standard B, 261,000; Standard C, 244,500. Estimating a maximum availability of 227,000 physicians in 1960, the anticipated shortages are 45,000, 34,000, and 17,500, respectively.[5] It should be noted that the estimates assume that all regions below the standard ratio will be raised to it, but that regions which are above the standard will retain their present ratios.

Both studies have received close scrutiny from Professor Dickinson, Director of the Bureau of Medical Economic Research of the American Medical Association. Among other criticisms, he objects to the choice of 1960 as the date by which the prospective shortage should be substantially overcome.[6] Since the ratio of physicians to population has been increasing during the past twenty years and is likely to continue to increase, he would prefer a more distant target date. On this question, I must beg to differ. Medical knowledge and application are rapidly changing and medical organization may change. It is hazardous to project needs beyond a decade. An early target date is preferable, particularly if the problem is framed in a manner that permits the testing of the answer against facts. Such an approach implies, at the least, development of techniques for ascertaining needs—hence, shortages—at any given time, especially today.

His second objection, which is very well taken, is that the National Health Assembly study and the report by Mountin, Pennell, and Berger find a shortage of physicians because a shortage is implicit in their assumptions. If a certain point in an array is selected as the standard to which all points below it are to be raised, while all points above the standard may retain their present status, a deficit is clearly implied.[7] That is not erroneous per se, if there are acceptable reasons for designating the selected point as the standard. But what do we know of

[4] *America's Health* (New York: National Health Assembly, 1949), p. 9.

[5] Joseph W. Mountin, Elliott H. Pennell, and Anne G. Berger, *Health Service Areas: Estimates of Future Physician Requirements* (Public Health Bulletin No. 305, 1949), pp. 11, 15, 89.

[6] Frank G. Dickinson, *An Analysis of the Ewing Report* (Bureau of Medical Economic Research, American Medical Association, Bull. 69, 1949), pp. 8-9.

[7] *Ibid.* Also Dickinson, *The Alleged Shortage of Physicians* (B.M.E.R., A.M.A., M-31; 1950).

the adequacy of medical care at any of the selected points, A, B, or C? There have been no detailed studies of their medical resources, how they are employed and the extent to which they are kept busy, on the one hand, and need, on the other hand.

Professor Dickinson has also shown that the numerator of the physician to population ratio employed as the standard in each study includes interns, residents, teachers, administrators, physicians in industrial practice, etc., who cannot be distributed in proportion to population. If they received separate treatment, the difference between the ratio in the standard region and elsewhere would decline and the magnitude of the apparent shortage would be reduced.

Nothwithstanding these criticisms, the method of the over-all ratio of physicians to population has been employed by its opponents to suggest that a substantial shortage in physicians does not exist today. It is stated, for example, that this country's physician-to-population ratio is substantially higher than that of any other country. Further, it is shown that the trend of the ratio in this country has been upward since 1929, most markedly so during the forties, and that with the opening of six approved medical schools in the past seven years, the upward trend will continue. Finally, to employ as a standard today the same ratio as in 1940, or a higher one, is to overlook the improvement that has taken place in the productivity of physicians. Faster and improved transportation, concentration of patients in hospitals, the new drugs, and the employment of auxiliary personnel have increased physicians' productivity.[8]

It has also been pointed out that the ratio of physicians to population is poorly correlated with various indexes of health, such as maternal deaths, infant deaths, life expectancy, etc. This would seem to render suspect the use of the physician-to-population ratio as a measure of need for health services and medical care.

In my opinion, it is almost axiomatic that certain environmental characteristics and economic factors are major influences on the health of a population. The fact remains that medical care is also important. How, then, is the need for medical care determined?

It is recognized that the need for medical services embraces preventive and diagnostic services, as well as therapeutic. The standard of need is best measured under these conditions: (1) services are comprehensive in scope; (2) they are available to a population of known age and sex composition; (3) they are freely used by patients, because there are no obstacles to the receipt of an additional individual service;

---

[8] Frank G. Dickinson and Charles E. Bradley, *Comparisons of State Physicians—Population Ratios for 1938 and 1949* (B.M.E.R., A.M.A., Bull. 78, 1950), pp. 4-5, 10, and *passim.*

(4) total services are subject to over-all supervision by physicians; (5) the limit on total services rendered is set by the available medical resources that can be purchased at reasonable prices by a known outlay; (6) the size of the outlay must be related to the economic capacity of the population served. These conditions are met when a medical group renders comprehensive services to subscribers of average means who prepay for their care.

Among the most prominent undertakings in group medical care is the Health Insurance Plan of New York (HIP), now almost four years old.[9] Charging an annual premium of $34 per person, it furnishes, through its affiliated medical groups, comprehensive medical services to its 250,000 subscribers. Although certain medical conditions are not eligible for care, most of the excluded conditions are recognized as the legal responsibility of some agency of government.

Study of HIP reveals the volume of medical services rendered to voluntary subscribers for whom the cost of an additional service is zero (disregarding costs of transportation, time spent, etc., which are present under any scheme of providing and paying for medical care). The effect of insurance on the utilization of medical services is already taken into account; preventive measures are encouraged; the individual subscriber who voluntarily continues to pay premiums is, presumably, more or less satisfied with the level of care he receives; and professional standards of care are observed by supervising committees of physicians. These are important advantages to using HIP experience to determine a standard of need for medical services.

The HIP data suffer from certain defects, which can be overcome in time and with further research. It would be hasty, however, to accept as the standard of need the HIP experience of 4.7 physicians' services per subscriber per year, leading to a requirement of 125 physicians per 100,000 population for medical care. To obtain a complete picture, it is necessary to add the number of physicians who render care to HIP subscribers in governmental hospitals or under the auspices of the workmen's compensation laws. On the other hand, it is necessary to recognize that few physicians connected with the thirty HIP groups serve insured patients exclusively. Most HIP physicians carry on an individual private practice. Similarly, a probable increase in the volume of preventive and diagnostic services (and in the rate of discovery of illnesses) implies a larger need for physicians in the future, while the elimination of accumulated backlogs of medical needs of new subscribers and the increased use of auxiliary personnel signify smaller needs.

---

[9] George Baehr, "Health Insurance Plan of Greater New York," reprinted from *Journal of the American Medical Association,* June 17, 1950, pp. 637-640 and "Professional Services under Medical Care Insurance," presented before Medical Care Section, American Public Health Association, November 2, 1950 (mimeographed).

Most students would also expect an increase in the need for physicians because of the aging population. This is still a moot question. Analysis of the HIP experience for the year 1948 by Dr. Deardorff suggests that the needs of the aged for medical care may be lower than most of us believe. Her findings indicate that the highest rate of utilization of medical services is connected with childbirth, when both the mother and the infant require considerable attention. Persons over sixty-five years of age do not utilize more medical services than do other adults.

Dr. Deardorff concludes: "Many older working persons with chronic conditions need only periodic check-ups to keep their disease under control, combined with a regime which protects them from over-fatigue and from special hazards that may exacerbate their condition—weather, worry, wrong diet, etc. . . . When they cannot follow the prescribed regime, they need the help of a resourceful social worker or of a first rate nurse more than they need a physician."[10]

To arrive at a realistic estimate of need for all physicians, we would add to the HIP standard for medical care, suitably adjusted, the further, and smaller, requirements for public health personnel, administrators, teachers, and research scientists. I hesitate to make such an estimate at this time, because the data required to adjust the published HIP experience are not at hand. The entire experience is recent, employment of auxiliary personnel, such as visiting nurses, is still rising, and the growth in subscribers tends to obscure changes in utilization by members over time.

For the sake of simplicity, the argument has hitherto implicitly assumed a unitary standard of need; therefore a national one. This assumption may be questioned in light of the previous espousal of the cause of a balanced program of expenditures. It may or may not be desirable to underwrite a national standard of medical care along with other expenditures; but it is surely not desirable to underwrite medical care alone unless the level underwritten is minimum.

IV. *The Demand for Physicians*

Let us examine the policy decision that need is our standard of adequacy for medical care. If medical care were subjected to the test of the market place, like most other goods and services, what could be said about the demand for physicians relative to the present number?

---

[10] Neva R. Deardorff, "The 1948 Experience of the Health Insurance Plan of Greater New York with the Utilization of Physician Services by the Enrollees in Each Age-Sex Group," *American Journal of Public Health,* December, 1950, pp. 1543-1544.

Professor Dickinson and others take the position that there can be no serious shortage of physicians because consumers receive what they pay for (and the indigent continue to receive whatever services they require). Indeed, they argue, consumers are currently receiving extra benefits. As is well known, consumers spend approximately 4 per cent of their total expenditures for medical care. They spend larger shares of the total on other items, such as liquor, recreation, personal services, etc. Moreover, between 1940 and 1949 the prices charged by physicians rose less than most other prices, only 38 per cent against a rise of 69 per cent in the cost of living. Relative to other items of expenditure, physicians' services have become a better buy. If consumers want more medical services supplied by more physicians, they should devote more money to this purpose.[11]

In one respect, this presentation of the facts seems incomplete. The expenditures of governmental agencies for medical care, which have been rising, are disregarded. True, the comparison also disregards government expenditures for liquor, etc. The difference is that the latter figure is in the neighborhood of zero, while governmental expenditures for medical care for civilian purposes approximate two billion dollars.

Comparison of consumers' expenditures for medical care with those for other items can be misleading, as many persons have noted. Expenditures for tobacco, liquor, or recreation may be considered by some as morally reprehensible, but they are certain, regular, low-priced per unit of purchase and, usually, pleasurable. Until the advent of health insurance, expenditures for medical care were uncertain, irregular, low-priced to some and very costly to those with serious illnesses, and scarcely pleasurable.

It should also be noted that the figure of 4 per cent is a computed weighted average, but scarcely a measure of central tendency: it reflects an overwhelming proportion of the population with small outlays for medical care and a small proportion of the population with huge outlays for medical care. It has not been shown that the persons with the large expenditures for medical care also indulge in large expenditures for liquor, tobacco, or recreation.

Today, insurance coverage is available, and an increasing part of expenditures for medical care takes place on a prepaid basis. To the extent that persons who do not suffer catastrophic illness in a given time period have bought insurance, total expenditures by consumers for medical care are higher than they would otherwise be. There are those who believe, however, that the benefits provided by many types of policy are inadequate and that the reluctance of consumers to buy them is understandable.[12]

---

[11] Council on Medical Service, American Medical Association, in *Voluntary Health Insurance vs. Compulsory Sickness Insurance* (1946), p. 99; Dickinson, *Medical Care Prices vs. Cost of Living* (B.M.E.R., A.M.A., Bull. 76, 1950), p. 2.

On the other hand, it has been suggested that by the very nature of the service, consumer expenditures on medical care are bound to be too low. As in education, free consumers' choice tends to result in too low an expenditure because the return is uncertain and social benefits exceed private benefits by a large margin. It is, therefore, advocated that consumers' choice either be abandoned or guided in order to increase expenditures for medical care.

The arguments presented above on the behavior of consumers agree that consumers' expenditures for medical care may be too low, in the sense that they may be expected to rise if certain circumstances are altered. Unlike Professor Dickinson, the proponents of these arguments imply that the possibility of altering these circumstances deserves serious consideration.

As for the conclusion that increased consumers' expenditures for medical care would bring about an increase in the volume of services, it is subject to qualification. Professor Dickinson is himself aware of the fact that variations in the rate of collections of bills and in the amount of free care are reflected in consumer expenditures. Perhaps more significant is the effect produced by the sliding scale, noted by Leven and others. A high degree of product differentiation makes the sliding scale possible; and it acts to raise the average level of charges for medical care. Incomes of physicians can rise without a corresponding expansion in services rendered.[13]

Some students of medical care, especially economists, point to the incomes of physicians as indicative of a shortage in the field. Friedman and Kuznets concluded that as much as one-half of the difference in average income between physicians and dentists is accounted for by the greater difficulty of entry into medicine.[14]

This specific finding on the relationship between physicians' and dentists' incomes can be questioned. There is reason to believe that Friedman and Kuznets failed to make adequate allowance for the additional training time incurred by medical specialists. Nor is it likely that physicians would view the protracted postponement of earnings actuarially. Finally, it seems important to take cognizance of the level of income that physicians have come to expect from their profession rather than the income earned in a comparable occupation, with an adjustment for training time. As Adam Smith pointed out, the prestige of

[12] Eli Ginzberg, *A Pattern for Hospital Care* (New York, 1949), pp. 288, 295.

[13] Maurice Leven, *The Incomes of Physicians* (Chicago, 1932), pp. 61-64; Milton Friedman and Simon Kuznets, *Income from Independent Professional Practice* (New York, 1945), p. 138.

[14] Friedman and Kuznets, *op. cit.*, p. 395.

certain professions is so great and the doubts and fears of the buyers so pervasive, that incomes in these professions tend to be high.[15] It is significant that none of the programs for the improvement of medical care now in circulation proposes to reduce the incomes received by physicians. If anything, the contrary is true.[16]

However, as Friedman and Kuznets argued, it takes only a small number of rational calculators to affect the margins of movement between professions and to validate the actuarial argument. Very likely, the income expectations of the rational calculators would be lower than those of the others. It is an incontrovertible fact that the pressure for admission to medical schools is particularly heavy, with only two out of every seven applicants currently securing admission.[17]

This pressure for admission to medical school by a large number of qualified applicants is sufficient proof of a shortage in the medical profession, independent of any income differentials, if one accepts the test of the market for the allocation of manpower. In practice, this test is not applied in the medical field lest an increase in the number of physicians produce certain undesirable consequences.

Dean Rappleye has given two major arguments against a substantial increase in the output of physicians: the quality of medical training would suffer; and the ethical standards of the medical profession might be impaired. Dr. Rappleye has stated: "Economic competition [in medicine] would [not] result in the maintenance of high standards of medical care because laymen cannot be expected to have a basis for judgment of professional competence."[18] Nor, in his opinion, can effective control be exercised by other means.

These considerations suggest that the automatic tests of the market cannot determine for us the number of persons who should enter into medicine. The test of need appears to be inescapable. Acceptance of need as the standard carries with it responsibility for financing the requisite number of physicians.

Professor Harris has proposed that increased expenditures for medical care should be encouraged in order to raise the propensity to consume and to provide jobs for college graduates.[19] This proposal appears tantamount to the assumption of a perennial shortage of physicians and other medical personnel.

---

[15] Adam Smith, *The Wealth of Nations* (Modern Library Giant), p. 105.

[16] Ewing, *op. cit.*, pp. 110-111; George Soule, *The Costs of Health Insurance* (New York, 1949), pp. 8-9; Bureau of Research and Statistics, Social Security Board, *Medical Care Insurance*, Senate Committee on Education and Labor Print No. 5, 79th Cong., 2nd sess., 1945, p. 49.

[17] Dean F. Smiley, Secretary, Association of American Medical Colleges, quoted in *Washington Report of the Medical Sciences*, September 25, 1950.

[18] Willard C. Rappleye, *Personnel—The Key to Effective Health Programs* (reprinted by the Josiah Macy, Jr. Foundation, New York, 1950), p. 8.

[19] Seymour Harris, *Hearings 1949, Part 1*, p. 155.

I have misgivings about this proposal. While much remains to be done towards improving medical care, especially in research into the whole field of prevention and into specific areas of therapy, Professor Harris' proposal covers considerably more ground. It is doubtful that medical care as an activity should be opened wide without any over-all limitations (limitations on individuals are not in question here). As previously pointed out, good health is the objective sought, and medical care is not a desirable end per se. A balanced pattern of expenditures is superior to a pattern that stresses medical care exclusively. Moreover, there is reason to believe that the demand for certain medical services is a direct function of the supply of medical personnel and facilities. Consequently, there is danger of initiating a permanent diversion of resources to medical care without any concomitant gain in consumer welfare.

Once again, the argument seems to point to the adoption of need as the standard.

V. *Special Areas of Shortage of Physicians*

While some students of the problem question the existence of a sizable shortage in the total number of physicians, nobody questions the existence of shortages in certain geographic areas, fields of specialization, and types of employment occupied by physicians.

For example, it is agreed that rural areas have fewer physicians relative to population than do urban areas. The secular decline in the ratio of physicians to population in rural areas is part of the national trend towards urbanization. It is also part of the trend in medicine towards specialization and greater reliance on diagnostic tools.

For a long time, rural incomes were lower than urban incomes and young physicians did not settle in the country. They were also reluctant to leave behind the urban hospitals where diagnostic equipment is of the best and consultation is readily available.

It should be realized, however, that the differences in the physician-to-population ratio between urban and rural areas overstate true differences in the medical care available. The specialist's residence in the city increases the city's physician-to-population ratio at the same time that it reduces the ratio of the neighboring countryside which the physician also serves. To a lesser extent, this concept of the medical market area is also applicable to the general practitioner. Because of improvements in means of communication and transportation, he can now serve a population distributed over a larger area than in the past. The trends towards hospitalization, a greater proportion of office calls, and a smaller proportion of home calls have enhanced his ability to do so.

In the past decade the long-term movement toward specialization in medicine has made great headway, especially after the war. In 1938, according to the American Medical Association, 20 per cent of all physicians in private practice were specialists; in 1949, 36.5 per cent.[20] What is the relative need for general practitioners and for specialists?

It has often been estimated that about 80 per cent of illnesses can be treated satisfactorily by general practitioners.[21] The current ratio of specialists to all physicians in private practice suggests that the general practitioner has lost ground.

The HIP approach (discussed in section III) is in part an attempt to restore the general physician in the city to his status as family physician. Because specialists are abundant in New York City, they render 44 per cent of all medical services in the HIP medical groups. If obstetricians, pediatricians, and internists are grouped with the general practitioners, the remaining specialists render 31 per cent of all services.[22] It is believed that the experience of HIP with respect to the utilization of specialists is atypical for the country as a whole. It may also prove transitory, to the extent that the recent movement towards general practice makes headway.

Dean Rappleye has testified that shortages exist in these fields: psychiatry, pediatrics, teaching, administration, pathology, radiology, public health, and industrial medicine.[23]

From the policy standpoint, it is well to distinguish two types of shortage. In fields that have grown very rapidly, the shortage reflects a lag in training. Psychiatry and, to a lesser extent, pediatrics (with respect to well-baby care) are excellent examples. There are other fields that are unable to attract the requisite number of competent and well-trained physicians, because private practice is so much more remunerative. Public health and full-time teaching in medical schools are excellent examples of this group.

It seems reasonable to suppose that the shortages in the first group will be overcome in the normal course of events. Shortages in the second group constitute more lasting problems. Raising of salaries and institution of retirement plans would undoubtedly be of some help, but private practice would continue to be more remunerative. The concentration of effort must continue to be on recruitment of young physicians—by offering them material assistance early in their careers and holding forth promises of meaningful work subsequently. To obtain the requisite number of young physicians in these fields, it seems necessary to increase the total number trained for the profession.[24]

---

[20] Dickinson and Bradley, *op. cit.*, p. 4.

[21] *Factual Data on Medical Economics* (Bureau of Medical Economics, American Medical Association, 1940), p. 15.

[22] Baehr, "Health Insurance Plan of Greater New York," *op. cit.*, p. 9.

[23] Rappleye, *op. cit.*, p. 10.

Today, a crucial area of need is presented by the armed services. In this field ordinary civilian criteria of need do not pertain, because the mission is different. Nor do civilian criteria of efficiency apply. Waiting and waste are an unavoidable aspect of military training and fighting.

National security is a major objective of national policy. There are times when it takes precedence over other objectives. This is a political decision, not an economic one. The defense requirements for physicians could easily overwhelm other needs, if defense requirements for all goods and services overwhelmed other demands. The allocation of physicians for defense is part of the total problem of national defense, subject to bargaining and adjudication among the various responsible authorities. The experience during the last war, when 60 per cent of all active physicians remained in the civilian community to care for 90 per cent of the population, suggests that the impact of a large diversion of physicians on civilian morbidity and mortality need not prove drastic, under conditions of high economic activity. However, the duration of the period of mobilization may be significant.

VI. *Conclusion*

If need is accepted as the basis for determining requirements for medical care for individuals, the market cannot perform the test of adequacy of care. However, it is not possible to rely on "medical" criteria alone to establish a standard of need; economic costs, in the sense of alternatives foregone, must be taken into account.

Most estimates of requirements for physicians are dated in the future. I believe that the more urgent task is to develop methods, techniques, and data which will enable us to estimate needs currently, under alternative assumptions. The answers will vary, depending on whether the standard of need is national or local, on who underwrites the availability of medical care, on how much money is devoted to medical care.

In my opinion, the most practical method for ascertaining a standard of need today is to study the utilization experience of known populations who receive comprehensive medical services by paying moderate insurance premiums. If the standard of need to be underwritten is unitary and national, it is not necessary to duplicate the studies unduly. If more than one standard is adopted, a large number of such studies will be required throughout the nation. In any case, if need is accepted as the standard, it implies a willingness on the part of physicians, hospitals, or the community to underwrite a level of demand corresponding to the standard of need, as defined. Otherwise there ensues a waste of resources in idleness.

---

[24] Paul R. Hawley, *Hearings 1949, Part 1,* p. 360.

Existing information does not permit us to prepare an estimate of total need for physicians for medical care according to the proposed method. There is reason to believe, however, that because of the existence of shortages in certain special areas and the measures required to relieve them, some expansion in the training of physicians may be indicated. Of particular moment are shortages of public health officers, teachers, administrators, and research personnel.

DISCUSSION

Louis S. Reed: It is indeed noteworthy, as Dr. Ginzberg points out, to have the subject of the economics of medical care given a place on the program of this Association. I hope it happens again and again, and that many economists will see fit to explore this field and become expert in it. The field is an inviting one. It is very much alive, rife with change and controversy. It is an extremely important one, both intrinsically and from the point of view of sheer dimensions. Here is an activity which absorbs 5 per cent of the national income. It has been said, "Give light and the people will find their way." Amidst the rampant emotions, the thought-beclouding slogans, it will be most helpful to have in this field the factual analyses that economists make.

In discussing these papers it is well to state more explicitly the nature of the problem to which we address ourselves. The problem exists because there is a gulf between where we are and where we want to be. The goal—the objective—on which I think all agree is that there shall be available to everyone those health services necessary for the prevention of disease, the treatment of illness, and the maintenance of mind and body in a state of good health. Those services are not now available to all. The problem therefore is what shall we do, what action shall we take, to make those services available to all.

That problem splits down into at least six problems, each with multiple subproblems.

First, since more knowledge of the causes of various illnesses is urgently needed, how can we best encourage and support the necessary medical research?

Second, at present half of our counties, containing 40 million people, do not have local public health services under full-time medical leadership, and the services in many other counties are partial and inadequate. How can we best get a blanket coverage throughout the nation of adequate local public health services?

Third, what additional health personnel—physicians, dentists, nurses, etc.—do we need in order to provide adequate health care to all, and how shall we bring these additional personnel into being?

Fourth, what additional hospitals and other health facilities do we need and how shall we bring them into being?

Fifth, many people cannot pay or have difficulty in paying for the health services they need. This is partly because of low income and partly because of the unpredictableness and uneven incidence of illness and the high cost of care in serious illness. The average hospitalized illness costs in the neighborhood of two hundred dollars and in some cases the costs rise to several thousand dollars. Most people cannot meet these costs on an individual payment basis. There is general agreement that prepayment is necessary. The problem is how can we best make adequate prepayment coverage available to all at costs which they can afford, and how can we get all or substantially all of the population to avail themselves of this protection.

Sixth, there is considerable leak, lag, and friction in the provision of medical service. In many respects medical technology has outgrown the traditional arrangements whereby physicians serve patients. The growth of medical knowledge has made for specialization, but thus far there is relatively little co-ordination among specialists, and the arrangements whereby a patient in a single illness consults several specialists each practicing solo has many disadvantages. We need more group practice among physicians in and out of hospitals, closer co-ordination between physicians and hospitals, and more co-ordination among hospitals. How can all of this best be brought about?

Dr. Klarman in his long paper has dealt with the need for physicians and hospitals. He has made a number of statements with which some may wish to take issue. He concludes that the best way of determining how many physicians and hospital beds we need is to examine the utilization of service under prepayment plans providing comprehensive service, preferably on a group practice basis. With this I think we can agree.

Dr. Goldmann has discussed various existing medical programs: those for recipients of public assistance, the veterans' program, workmen's compensation, voluntary health insurance. He concludes that these programs constitute a "hodgepodge," that they meet some needs of some population groups, but are far from being a satisfactory answer to needs. In disarming language he raises certain of the leading questions that need to be answered if we are to go forward. Some of these questions will undoubtedly be discussed at length in the session dealing with alternative solutions.

I should like primarily to address myself to Dr. Ginzberg's polished paper. With much that he says everyone, I am sure, will agree. However, with some of the apparent implications of his remarks, I disagree. It seems to me that he has let himself become mired down in an excess of caution. He lays so much stress on all the mistakes we can possibly make that his paper robs us of will to act. Rightfully he points out that all of the problems in the health field are interrelated, that action in one field calls for action in others; yet his counsel of not doing this until we do that tends to a degree to be a counsel of inaction.

It is perfectly true, as Dr. Ginzberg points out, that health depends on a lot more than medical care: good food, a high standard of living, full employment, etc. Years ago spokesmen for the medical *status quo* used to argue that before doing anything about medical care we should deal with other more pressing problems: unemployment, bad housing, low wages, poor nutrition. In other words, leave medicine alone until there are two cars in every garage. Obviously the fact that there are these other problems should not keep us from getting on with this one.

Dr. Ginzberg lays much stress on the need for giving priority to measures for prevention. I agree. Yet it is well to point out that we have pretty much reached the stage where preventing illness or reducing mortality calls for better medical care for the individual. The great decreases in death rates over the past fifty years—decreases which took place largely among infants and young children—were brought about largely by attack, often through sanitary measures or immunization, on certain communicable diseases: typhoid, diphtheria, smallpox, infant diarrhea, malaria, yellow fever. These diseases have all been reduced to the vanishing point. Now the main killers and disablers are the chronic diseases: heart disease, cancer, tuberculosis, mental disease, kidney disease. The chief means of dealing with these diseases are early diagnosis and treatment. And one way of achieving this is through the development of prepayment which breaks down the economic barrier between the patient and the medical care he needs.

Dr. Ginzberg counsels against the building of hospitals which cannot be supported. I think that under the Hill-Burton program we have built a few hospitals which the communities in question are going to find it difficult to support under present methods of paying for hospital care. Sooner or later that program will come up flatly against the question: what about communities which need hospitals but cannot support them? Shall we then let these communities stew in the juice of their own poverty or develop a prepayment program which will enable them to support the needed hospitals?

Much, it seems to me, hinges upon the development of sound prepayment programs; yet here Dr. Ginzberg urges going slowly. He says: "I would be the first to warn against the naïve belief that alteration in the present methods of payment, even such a major change as the institution of compulsory government insurance, would contribute materially to the solution of the vast numbers of problems which are involved in raising the health standards of various sections of the country."

I happen to be naïve enough to believe that the development, by one means or another, of arrangements whereby all would participate in a prepayment program or programs under which for small regular contributions, varying with income, people would be able to receive all needed care, at least in hospitalized illness, would make a material contribution to the welfare of the nation. Such arrangements would relieve millions and millions of families of low and middle incomes from worry as to how to meet hospital bills; would enable people to receive care earlier in illness and without bankrupting themselves; and would relieve hospitals of a heavy burden of charity care—a burden which threatens the solvency of many hospitals. The development of such a program or programs, by whatever means accomplished, would not of course solve all health problems, but it would solve one major problem and contribute towards the solution of others.

CALVIN W. STILLMAN: The Association is certainly fortunate in obtaining for this session my four predecessors, each of whom has done very important work in the economics of medical care, and especially fortunate in obtaining Dr. Hawley as chairman. I doubt if any physician in the land can equal Dr. Hawley's splendid accomplishments in organizing medical services.

The three major papers have dealt with: the complexity and pervasive nature of the economic factors which affect health (Dr. Ginzberg); the *ad hoc* patchwork of special programs which has sprung up for provision of medical care (Dr. Goldmann); and the important role of extra-economic factors in determining "need" for medical services (Dr. Klarman). Each of these papers makes a clear and an important point. Yet I find it unavoidable to conclude that economic analysis has yet to be brought to bear upon medical care with the full effectiveness of which it is capable. These papers, in common with the great majority of printed material which falls under the heading "medical economics," appear to deal with matters which are on the periphery of the central matter of allocating scarce means to accepted ends. Certainly matters of definition are important, and all that has to do with cost, payment, and the provision of a service is in some wise an economic problem; but economics has more to offer than words to use in special institutional contexts. I should like to suggest some promising approaches for the application of our classical methods to the study of medical care.

To the extent that there exists a problem of medical care, it is a moral problem, related to the Samaritan ethic of our culture. Existence of this problem is predicated upon the agreement that normal workings of our economic system do not achieve the distribution of medical services to individuals which we believe proper. Dr. Klarman suggests that this moral problem is at once an economic problem, since economically significant resources must be used in achieving a solution. With this I cannot agree; I suggest that for an economic problem to exist, ends must be clearly defined, and that an economic problem consists of achieving maximum efficiency in allocation of resources. Setting up the ends in terms of human needs for medical care is emphatically a moral problem, not only in defining the needs, but in determining the degree to which they shall be met, how, and at what cost in terms of alternative uses of resources.

Were I asked, I would state my personal feeling to be that everyone should have access to the full range of medical services, not without cost, but without being required to surrender more than 10 per cent of his budget at any time. I certainly agree with Dr. Ginzberg that in any plan for reform consideration should be given to local differences, local values, and the sovereignty of individual choice. I would insist, however, that choice must be made effective. I think that the proper sphere for public action is to guarantee the pre-existence of those facilities necessary to make choice of their use something within the range of possibility. Action taken relative to the moral problem of medical care then becomes a parameter of the economic problem of efficiency in meeting the given ends.

The proper area for application of the traditional analysis to medical care has become clouded by the use of unfortunate terms, and by the implicit carrying over of concepts useful in other areas of the economy. This situation has arisen through the lack of interest in medical care evinced by the economics profession generally. Two areas for new thought and investigation are at once apparent: the problem of capital investment in the medical-care plant and the problems presented by the medical profession itself.

Dr. Ginzberg's excellent summary of the institutions relevant to the nation's health suggests the nature of our capital investment in health. Obviously, much of this investment is social rather than entrepreneurial. Tuitions pay only about 30 per cent of the costs of operating medical schools; public investments for environmental sanitation are a far cry from profit-making enterprises; public and charitable funds are of overwhelming importance in maintaining our hospitals. To get more medical services requires, then, added investments in health plant, not only *in toto,* but in the right places and of the right kind. As Dr. Ginzberg and Dr. Klarman both point out, the channels of investment are many, and investment should proceed in such a manner that the marginal returns in each channel shall remain equal. Among these channels I would include the services of co-ordinating medical care and of providing for its orderly payment, as described by Dr. Goldmann. Such systems I hold to be as much a part of capital equipment as hospital buildings. Dr. Reed has pointed out that without some form of national pooling of medical purchasing power—he suggests compulsory health insurance—extension of new capital investment into low-income areas cannot be justified. National pooling, then, is an integral part of the capital equipment needed to provide all persons with medical care within the framework of free choice which we hold so important.

A footnote to the problem of capital investment in medical plant is the matter of control over the resulting services. Dr. Hawley could tell us of the conflicts which go on within hospitals between staff physicians and hospital administrators over the right to exploit the monetary rewards attributable to the hospital's existence.

The medical profession itself is worthy of careful study. In attempting this, economists follow in the footsteps of pioneering sociologists, and at least one political scientist.[1] The medical profession is definitely the fat boy in the canoe, in any discussion of the medical-care industry; its influence—if not dominance—is ubiquitous. It is futile to discuss hospitals without including mention of the interests and influences of hospital medical staffs; it is futile to discuss preventive medicine and extension of public responsibility without recognizing the traditional suspicion and hostility of the medical profession to any changes in these areas. The tremendous prestige of the medical profession gives it many of the attributes of a sacred cow, but this need not require us to take Dr. Ginzberg's advice and refrain from playing the role of veterinarians. For even if the cow is careless concerning its health, millions of devout followers would have it otherwise. The medical profession constitutes a tremendous national asset, but its thought-ways are equipped with as opaque blinders as its insights in technical matters are brilliant. Fortunately for economists, the medical profession has a tremendous interest in competition between its members. This interest colors the actions of the profession and its organizations and facilitates economic analysis of the medical market.

It is convenient for the medical profession to sponsor the implicit assumption that medical services are provided by many independent practitioners, all roughly equal in ability, each competing with his fellows in a free market, each serving a vertical cross-section of the community income-wise. Further, it is assumed that all consumers are connected with a "family doctor" and uniformly dependent upon him for medical advice and emotional support.

---

[1] Oswald P. Hall, "The Informal Organization of the Medical Profession," *Canadian Journal of Economics and Political Science*, February, 1946, pp. 30-44; "The Stages of a Medical Career," *American Journal of Sociology*, March, 1948, pp. 327-336; "Types of Medical Careers," *ibid.*, November, 1949, pp. 243-253; Harvey L. Smith, "The Sociological Study of Hospitals" (unpublished Ph.D. dissertation, Department of Sociology, University of Chicago, 1949); Oliver Garceau, *The Political Life of the American Medical Association* (Harvard University Press, 1941); see also Calvin W. Stillman, "Economic Analysis of the Policies of Organized Medicine" (unpublished Ph.D. dissertation, Department of Economics, University of Chicago, 1950).

The facts are otherwise. Technological advance has rendered it impossible for any physician to know much of the entire field of medicine; physicians have become specialized and dependent upon each other and upon institutional devices such as hospitals and diagnostic laboratories. Physicians vary greatly in possession of the assets which are important in making a living as a doctor —social connections, hospital appointments, and the like. Since disposition of most of the pertinent assets lies with physicians in the same community, competition in terms of price or product is stifled; competition can be only for the advantages which offer quasi-rents to their possessors. The implicit Marshallian analysis gives way at once to the analysis of Chamberlin—and even more importantly to that of Triffin.

We know now that patients differ, also, and the economic characteristics of their diseases differ.[2] But maintenance of the older assumptions permits the medical profession to extol the virtues of discriminatory monopolistic pricing —as a device to achieve a wider distribution of medical care—and to force all medical treatment into the pattern of the practitioner isolated with *his* patient. In attacking every threat to either of these principles, the medical profession has acted with amazing—if unrecognized—economic rationality. Always the tendency is to protect the competitive *status quo,* freezing into place the special advantages of the physicians who have achieved them. Thus opposition to expansion of medical schools, to group practice, to school health, and to liberalized insurance plans is cut from the single cloth of maintenance of established competitive advantages.

Control of competition within the medical profession constitutes a very large element of the economic problem of distributing medical care with given resources and given ends. This control militates against reorganizing existing services as much as it militates against expanding capital equipment for an enlarged flow of services. Since this control is at the capillaries of distribution of services, it can best be policed by consumers of medical services at local levels—if they can be shown what is happening to the resources they contribute toward the support of their own medical services.

---

[2] Cf. Jurgen Ruesch, *Chronic Disease and Psychological Invalidism* (Psychosomatic Medicine Monographs, Society for Research in Psychosomatic Problems, 1946); Jurgen Ruesch, Annemarie Jacobsen, Martin B. Loeb, "Acculturation and Illness," *Psychological Monographs,* 1949.

ECONOMICS OF MEDICAL CARE: II. ALTERNATIVE

THE BRITISH HEALTH EXPERIMENT: THE FIRST TWO YEARS OF THE NATIONAL HEALTH SERVICE[1]

By SEYMOUR E. HARRIS
Harvard University

On November 6, 1946, the British Government enacted the National Health Service Act; and on July 5, 1948, the Act came into force. It is probably no exaggeration to say that no recent legislation and administration in Great Britain has aroused as much interest in this country as the so-called "socialized" medicine of Great Britain.

Covering 92 pages and about 35,000 words, the Act is a complicated law.[2] It follows in a general way the recommendations of the Beveridge Report of 1942: ". . . a comprehensive national health service will ensure for every citizen that there is available whatever medical treatment he requires, in whatever form he requires it, domiciliary or institutional, general, specialist or consultant, and will ensure also the provision of dental, ophthalmic and surgical appliances, nursery and midwifery and rehabilitation after accidents."[3]

The purpose of this Act "is to make all the health service available to every man, woman and child of the population, irrespective of their age, or where they live, or how much money they have; and to make the total cost of the service a charge on the national income, in the same way as the Defense Services and other national necessities."[4]

Whereas in the past the charge for service protected the physicians and hospitals from many who did not need the services, now the availability of services without extra payment increases demands of those without strong claims.

In presenting this paper, I shall concentrate primarily on those aspects of the problems upon which an economist can throw some light. On purely medical issues, I shall have to depend upon statements published in the *British Medical Association Journal*, in *The Lancet*, a report by a Committee of the A.M.A., reports by the British Government, and so on.

---

[1] I am greatly indeted to Mrs. Daniel Cheever for research help with this paper.

[2] *National Health Service Act, 1946, 9 and 10 Geo 6*, Ch. 81.

[3] *Social Insurance and Allied Services: Report by Sir William Beveridge* (Macmillan Company, 1942), pp. 158-163.

[4] *The National Health Service* (H.M.S. Office, 1948), p. 2.

Direction of Increases of Costs

The table below shows that the largest increases have occurred in special categories. Whereas in relation to estimated costs in 1948-49, these special services required 11 per cent of the health costs, in 1949-50 they absorbed almost one quarter. But general practitioners' services absorbed but 15.8 per cent in 1948-49 (estimate) and 10.5 per cent in 1949-50. The respective figures for hospital services were 57.4 and 51.7 per cent of total costs. In fact, the rise for ophthalmic services was from 3 to 25 million pounds sterling and for dental services from 10.8 to 48.6 millions.

The direction of the rise of outlays is one explanation of the complaints of the practitioners. Although the general view is that the income of the practitioner has greatly increased (though not per unit of services), it is clear that the practitioners have lost ground relatively. They complain bitterly of the failure of their incomes to respond to the increases of the cost of living since 1939 and of the large work load relative to the rise of income.[5]

MEDICAL COSTS IN THE UNITED KINGDOM UNDER N.H.I., 1948-49 AND 1949-50
(*£ Million*)

	Original Estimate, 1948-49	Revised Estimate, 1948-49	Original Estimate, 1949-50	Revised Estimate, 1949-50
Pharmaceutical services	16.9	23.6	20.8	35.3
Dental Services	10.8	29.1	30.9	48.6
Ophthalmic services	3.1	20.0	14.7	25.1
Total	30.8	72.7	66.4	109.0
% gross cost of National Health Service	11.6	19.8	18.9	24.2
General practitioner service	42.0	45.1	45.8	47.1
% of gross costs	15.8	12.3	13.0	10.5
Hospital maintenance expenditure	153.1	180.4	184.6	232.6
% of gross costs	57.4	49.0	52.4	51.7

Source: *British Medical Journal*, March 18, 1950, pp. 664-666.

The above table suggests a weakness in the national health program, for the general practitioner seems to be receiving less favored treatment. But, as we shall observe later, the heavy concentration on special services may be only a temporary phase.

A comparison with the pattern of medical outlays in the United States reflects the current pressures on British practitioners. In the United States in 1949, private outlays on physicians amounted to 2,267 million dollars and on dentists, 931 millions.[6] Against roughly equal outlays in the United Kingdom, the physicians in the United States received 2½ times as much as dentists; and the physician received a much larger part of total medical outlays than in the United Kingdom (even with allowance for public outlays here). These figures are not strictly comparable, because the British figures exclude the specialist and also because of the peculiar demands on the special services in the early stages of the program.

---

[5] *British Medical Journal,* March 25, 1950, pp. 709-712; London *Economist,* July 8, 1950, p. 67; *The Lancet,* November 26, 1949, pp. 995-996.

A comparison of incomes of physicians in the United Kingdom and the United States may also be helpful. In 1947, the net income of physicians in the United States was $9,889.[7] At present the figure is probably closer to $11,000. This figure might be compared with about $5,000 for the British physician.[8]

The net income of the British physician is really not far out of line with general incomes. It will be recalled that the per capita income of the British population in dollars is roughly about three-fifths that of the United States, and the pay levels in British manufacturing even less, relatively. In 1949 manufacturing wages in the United Kingdom averaged $24 and in the United States $55 weekly.[9] Hence, although the British physician's income (and notably the practitioner's) has not risen with the increased number of pounds sterling going into medicine nor in proportion to the amount of additional work, his income relative to that of the factory worker is higher in the United Kingdom than the physician's income in the United States relative to the income of the factory worker. But the British physician's income is somewhat less relative to per capita income vis-à-vis this relationship in the United States.

Finally, we should note one other aspect of British health costs. The rise of hospital charges has been large. From prewar to 1947, the increase of weekly costs for 159 voluntary hospitals was from £3 19*s.* 7*d.* to £11 4*s.* 0*d.*, or a rise of about 180 per cent. The explanation is held to be mainly large increases in salaries and better service to each patient.[10]

[6] *Income Number, Survey of Current Business* (*SCB*), July, 1950, p. 24.

[7] *Medical Economics*, September 1, 1948, pp. 60–61.

[8] *Medical Care in England under the National Health Service* (American Medical Association), pp. 28–31. I have used the statistics presented here, but have arrived at a higher net income of British physicians. (The second correction below tends to reduce British income.) First, I have made some allowance for specialists' income. Second, I have estimated gross income at 16*s.* per patient, not of £1 as the A.M.A. Committee did (and wrongly); and, third, I have converted sterling at £1 = $4.00, not £ = $2.80. The former seems the appropriate figure, since in 1949 prices and incomes had not responded substantially to the new exchange rates.

[9] *National Income and Expenditures of the U. K., 1946 to 1949*, p. 13, and *Mid-Year Economic Report of the President*, July, 1950, p. 125.

[10] London *Economist*, November 20, 1948, p. 827.

This increase should be compared with one of but 80 per cent for all hospital rates in the United States.[11] The rise of hospital costs exceeded that in the cost of living in the United Kingdom by 73 per cent; in the United States, by only 14 per cent.

The Costs

Undoubtedly the costs of national health insurance have been high and the amounts expended have increased beyond the estimates.

COSTS OF HEALTH SERVICE, 1946 TO 1949–50
(*£ Million*)

	Estimate, 1946	Original Estimate, 1948–49	Final Estimate, 1948–49	Estimate, 1949–50
Total	167	265	368	352
Deduct contributions from National Insurance Fund, etc.	41	65	90	92
Cost to taxpayer	126	200*	278	260*

* The official statement puts the cost to the taxpayer at 145 million pounds in 1948–49 and 249 million pounds in 1949–50. *Financial Statement* (1949–50) of April 6, 1949, p. 12.

Source: *The Practitioner: The National Health Service Act in Great Britain* (London, 1950).

In his budget speech of April, 1950, the Chancellor of the Exchequer commented on the large increase of expenditures for National Health Insurance; and the Chancellor reminded the House of Commons that the increase of 133 million pounds (over the 260 million estimate) would not be repeated. He stated: "It is clear that it is not possible under existing circumstances to permit any over-all increase in the expenditures on the Health Services. Any expansion in one part of the services must in the future be met by economies, or if necessary, by contractions in others."[12]

The final estimate of costs for 1949-50 was 359 million pounds and the original estimate for 1950-51 was 393 million.[13]

The Significance of These Costs

No one will gainsay the fact that national health services involving outlays of close to 400 million pounds is a costly program in Great Britain and that the costs have far exceeded the estimated amounts. The Beveridge program for social security from the cradle to the grave was to cost only 697 million pounds in 1945 and 858 million in 1965, with net charges on the exchequer to be 351 and 519 million pounds sterling, respectively. For health services, Beveridge estimated total outlays in each of these two years at 170 million pounds.[14]

---

[11] F. S. Dickinson, *The Cost and Quantity of Medical Care in the United States* (Bulletin 66, A.M.A., 2nd Printing, 1948), p. 14.

[12] *Parliamentary Debates* (Hansard), Vol. 479, No. 28, April 18, 1950, p. 39.

[13] London *Economist*, March 11, 1950, pp. 520-521.

Are there any alleviations? There are. First, a large part of the excess over estimated outlays stems from outlays that may not be repeated in as large amounts. For example, the backlog of neglected teeth, of uncorrected vision, and of neglect of hospitals account for a substantial part of the unexpected outlays.[15] On the other hand, the construction of 2,400 health centers—an important item in the government's plan—is still far off. Quite recently, only three centers were under construction, with the first apparently to cost 150,000 pounds. At this rate, 2,400 would cost about 350 million pounds.[16]

Second, though the amounts involved are large, they far from represent a net loss to the community. Indeed, the amounts included in the Treasury Budget are substantial compared to less than 130 million pounds involved annually under the former government health insurance program; but a large part of the current outlays were spent previously under private auspices. Now very little is spent under private auspices.

Third, the money used for medical services is obtained partly from insurance contributions and partly from general taxation. These are transfer payments which involve real costs to the nation only insofar as resources that would otherwise have been used more productively are now transferred to medical services. It is clear that increased utilization of medical personnel and facilities accounts for a large part of the additional services (e.g., the crowded offices of doctors and the strain in outpatient departments of hospitals); and that another large part of the costs is at the expense of all kinds of commodities and services which would have been produced had taxes not been increased to cover the cost of health services.

In part, however, the increased medical services are at the expense of other goods and services badly needed for the economy. For example, from 1946 to 1951 the number of women aged fifteen to forty will have fallen by 374,000. Yet the medical program requires an annual recruitment of 15,000 trained nurses and 2,000 qualified midwives.[17] The diversion of more resources in the pharmaceutical business and medical appliances must also be largely at the expense of other commodities and services needed for domestic consumption or investment or for export.

Fourth, as the welfare state expands its functions, the costs more and more are borne by the beneficiaries. In other words, *qua* taxpayer the insured pay for their medical services, and less and less do these payments become a burden on business and industry.[18]

---

[14] *Op. cit.*, p. 209.

[15] London *Economist*, June 18, 1949, p. 1130; October 29, 1949, p. 934.

[16] "Medical Care in England under the National Health Service," pp. 22-23.

[17] *The Practitioner*, op. cit., pp. 100-101.

It is a fact that the low-income groups have improved their position. Thus, according to one estimate, from 1938 to 1949 the per capita consumption of the working class rose by 17 per cent, that of the middle class declined by 18 per cent, and that of the wealthy by 42 per cent. The explanation is not, however, primarily transfers from rich to poor but rather the gains from higher employment and productivity, which benefit especially the working class. Against gains of 110 million pounds in personal income transfers and 212 million in subsidies since 1938, the direct taxes on working classes increased by 139 million and in indirect taxation by 371 million. That is to say, their increases in taxes have exceeded their transfers and subsidies. Of course, part of the 510 million pounds is the contribution of the workers to the cost of the war. Insofar as this is not an adequate contribution to the war costs, then it may be held that other classes subsidize the workers' welfare programs. The working classes pay much heavier taxes on alcoholic beverages, tobacco, and luxuries generally (all indirect taxes are up from 412 million to 1,675 million pounds) and the government uses part of the proceeds to finance the welfare state, inclusive of health services.[19]

Can the British Afford These Large Outlays?

Obviously a country that faces serious balance-of-payments problems and labors under inflationary pressures must watch its outlays for social services. In a fully employed economy, increased outlays for social services tend to increase pressure on limited resources and hence to raise prices, and also to use up resources that might go into export products or be substituted for imports. Preparations for war are an added reason for caution. Higher prices and diversion of labor, capital, and materials into medicine contribute toward increased imports and reduced exports and hence to dollar shortage. Expenditures on health are especially relevant here, since the largest increases are to be found here. In 1948, expenditures of the central government were 2,760 million pounds; in 1950-51 (estimated), 2,918 million.[20] This rise of 158 million pounds is to be compared with an increase of public outlays on health services of about 300 million.

---

[18] Medical journals, for example, tend to exaggerate the burden on industry and fail to note that the charge is largely on the beneficiaries. *British Medical Journal*, March 18, 1950, pp. 664-666, and *The Lancet*, September 24, 1949, p. 799.

[19] F. Weaver, "Taxation and Redistribution in the United Kingdom," *Review of Economics and Statistics*, August, 1950, pp. 212-213; and United Kingdom, *National Income and Expenditures of the United Kingdom*, 1946 to 1949, Cmd. 7933, pp. 34-35.

[20] *Ibid.*, 1946-49, p. 35; and *Parliamentary Debates*, April 18, 1950, p. 57.

Here again, we may be exaggerating the strain put upon the economy by the health program: first, because, as already suggested, the additional costs are financed by taxation and primarily by taxation on the beneficiaries; second, because the British Government's fiscal activities on the current basis at any rate have been anti-inflationary: in 1948 and 1949 the British Government spent 2,760 and 3,026 million pounds sterling, but revenues exceeded expenditure by 369 and 318 million pounds sterling. An excess of receipts tends to reduce the total amount of spending. For 1950-51, the Chancellor estimates the true revenue surplus at 411 million pounds.

Should allowance be made for capital outlays of the central government, however, then outlays exceed receipts and the central government puts out more funds than received from revenues.[21] Only in this sense may the added outlays for health be considered inflationary: conceivably the government might have increased taxes (and on the masses) and yet not have provided the social services.

The Burden of Health Services in the United Kingdom and the United States

Really satisfactory figures for comparison are not available. But here I compare private outlays for medical and death expenses in the United States (1949) with outlays for National Health Services in the United Kingdom (1950). By estimating the latter at 400 million pounds, I inflate the latter total to include the small private outlays.

A Comparison of Relative Cost of Health Services in the United Kingdom (1950) and the United States (1949)

	Total Expenditures (Millions*)	Health Expenditures as % of Total Consumption Expenditure	Expenditures as % of Personal Income	Per Capita Income	Per Capita Health Expense	Per Capita Medical Expense as % of Per Capita Income
United Kingdom	$1,600	4.5	3.7	$ 856	$32	3.7
United States	9,000	5.0	4.4	1,373	60	4.4

Source: U. K. expenditures, income, etc. from *National Income and Expenditures of the U. K.*, 1946 to 1949; and U. S. from *Survey of Current Business*, National Income Number, July, 1950.

* Converted at $4.00=£1 (since price and income adjustments to depreciation had not yet been made).

The reader will observe that relative to consumption expenditures, to income, or to per capita income, the cost of health service is somewhat higher in the United States than in Great Britain. The per capita medical costs in this country exceed those in the United Kingdom by more than our per capita income exceeds that by the United Kingdom. Should allowance be made for the more than 2 billion dollars spent for health out of public funds in this country, then the advantage of the United States would seem even greater.[22]

---

[21] *Ibid.*, pp. 34-37.

Quantity versus Quality

In their appraisal of N.H.I., the medical profession has been especially critical of the quality of medical care given under N.H.I. Thus a Committee of the A.M.A. concluded: "The center of gravity of medicine has shifted, and emphasis is on numbers rather than on service. A physician can no longer gain recognition by rendering better service and thus secure a financial reward on a paying private practice. If he is to survive financially, he must gain in numbers at the sacrifice of quality of service. . . . There is evidence that in some instances the quality of the work is beginning to suffer. . . . The statement is based on personal observation of limited and crowded space for examination, inadequate histories and clinical observations and the testimony of administrators."[23]

A writer in the *Practitioner* concludes: "There is no evidence that the health of the nation has benefited from the first year of the National Health Services. . . . If politics can be subjugated to the principles of the Hippocratic oath, there are good grounds for believing that out of the present chaos there will come forth a medical service of which the country can be justly proud."[24]

But a distinguished American physician, in a judicious survey of the British experiment, summarized the British service as follows: "I am unable to assert that the general standard is higher under the National Health Act than it was before that went into effect; but, on the other hand, I have encountered no convincing evidence that it is lower, and certainly more people get it."[25]

Aside from views of medical experts, the net result of British N.H.I. is bound to be greater emphasis on quantity than on quality. Widespread use of medical facilities is after all the objective of the program: "Medical service for all." The wider distribution of medical services means that the poor can now increase their dental care, obtain eyeglasses, profit more from the help of specialists, and satisfy their psychological cravings for medicine. The long queues at the "surgeries," the delays of eighteen to twenty-four months to get a tonsilectomy, the interminable delays and slipshod work for dental treatment (dentists frequently close lists for three months), a waiting list of 7,600 in one hospital with forty patients there over a hundred days, a waiting period of six months for glasses, the frequent treatment of less needy cases, a tendency to discourage patients requiring much time, e.g., the very young and old—all these point to the pressure of "free" medicine on limited resources. With the physicians overworked, they necessarily cut the time of each visit and in general deteriorate their product.[26] As many have observed, the physician tends to depend less on history, clinical observations, and the like and more on snap judgment and medical prescriptions.

---

[22] *The Nation's Health, A Report to the President,* by Oscar R. Ewing (1948), p. 30.

[23] *Medical Care in England under the National Health Service,* pp. 19, 43.

[24] *The Practitioner,* p. 16.

[25] J. H. Means, "England's Public Medicine: The Facts," *Atlantic Monthly,* March, 1950, p. 56. Also, see W. C. Rappaleye's objective study; he concludes that the program is operating reasonably well. *The National Health Service of Great Britain* (1949), p. 32.

Against any deterioration of quality, we must put the gains of better distribution of medical resources. The philosophy of the N.H.I. Act is medical service according to need, not according to means: "The new arrangements confer a great benefit on medicine by lessening the commercial element in its practice. The money barrier protected the doctor against those who did not need his help but also separated him from those who did."[27]

Against the current deterioration (and it would be a mistake to overstate any decline in quality; for there is much evidence from medical experts that the deterioration has not been serious), we must also consider the possibility of expansion of facilities and better distribution of both facilities and personnel. It is possible to have both higher quality and more medical services. But this will take time especially in a fully employed and semiwar economy. It may well be that the Labour Government should have introduced its health program more gradually, awaiting the expansion of scarce resources. Had the government, for example, at first restricted demands by a small charge and put greater limitations on the use of scarce resources (e.g., prosthetics), then any sudden decline of incentive and standards might have been avoided. Unfortunately, this is a political rather than an economic or medical problem.

I should emphasize the fact that any quantitive gains already made are not merely at the expense of quality. First, the N.H.I. program facilitated a more intensive use of existing capacities. The additional service comes partly out of unemployed resources. Second, with the increased stimulus of additional outlays for medicine, additional resources are diverted to the medical field. In some measure, these re-

[26] See, for example, *The Practitioner*, pp. 108, 48; A.M.A., *op. cit.*, pp. 16, 34-37; London *Economist*, August 14, 1948, p. 269.

[27] *The Lancet*, July 3, 1948, p. 17.

sources become available almost immediately—e.g., imports of chemical supplies and influx of pharmacist assistants; in some measure, the influx will take time—e.g., the training of nurses, physicians, and specialists.

Third, some "wastages" are eliminated. For example, luxury medicine is on the way out. With 95 per cent of the physicians, 90 per cent of the dentists, and almost 100 per cent of the chemists enrolled in the N.H.I. scheme even in the latter part of 1949[28] and with the government largely pre-empting private facilities in the hospitals and making private use expensive, the result is greater availability of resources previously used in luxury medicine for the use of masses of the population.

Fourth, as the medical services are better integrated and especially as the health centers are put into operation, the service should profit greatly from increased economies of scale; i.e., lower costs per unit of operation.

Fifth, monopsonistic buying on the part of the government, which will eliminate unnecessary selling and advertising expenses and cut down private markup, and careful listing of medicines and drugs available under the scheme should make the medical dollar go further.

The argument so far has been that the increased quantity of medical care is far from being merely at the expense of quality; and, as resources more nearly equal the requirements under N.H.I., that maintenance of quality and even improvement may be quite consistent with much better distribution and greater recourse to medical facilities. But there is another side to the problems raised by a national health service scheme. The system of payment used may well involve the economy in wasteful outlays.

Wastage?

Under N.H.I. the insured are entitled to various medical services and supplies. Since they can obtain these without payment of any additional sum (other than contributions under the insurance scheme), the temptation is to demand services in excess of need. European experience with health insurance affirms that there is a tendency for patients to use services excessively.

In some European programs, the insured are required to make a small payment in order to encourage economical use of facilities. The British scheme now includes a provision allowing the administration to impose a charge for any chemicals (drugs) purchased. So far apparently this provision has not been put into effect. Many authorities in the United Kingdom have demanded that a payment be made for every visit to a physician, for every stay at a hospital, for each treatment of the dentist, etc.[29] Undoubtedly a charge, say fifty cents, for each visit at the doctor's office or a dollar per day for hospital services would deter wasteful use of services. Unfortunately, it would also discourage early and necessary treatment. Hence the wastes must be weighed against losses resulting from failure to obtain required services.

---

[28] *Ibid.*, September 29, 1949, p. 573.

Again, the British system is wasteful in still another way. The method of payment of the members of the health profession is not one which encourages the most effective use of the medical dollar. Thus, the practitioner is paid on a capitation basis, with a limit of 4,000 patients per physician without assistant. Since the average number of insured per physician is about 2,200, the result is that many physicians tend to enlist too many patients, and many are excessively idle. The capitation system stimulates the physician to seek patients and tends to distribute the load unevenly; and it also puts a premium on hasty diagnosis and treatment. A salary method of payment would probably result in a better distribution of work, for with a fixed payment the patients would be more evenly allocated among doctors. The capitation system, however, has a much greater appeal to the physician and the B.M.A. than a fixed income payment.

Specialists are paid largely according to experience and time put in. Here the income method of payment rather than capitation fee is in vogue; but the system offers incentives in that, beyond a certain point, only merit rises (three classes) are provided. The net effect of the government's program has been greater rewards for young specialists and smaller rewards for the older, and especially for the outstanding, specialists. The net result may well be some economies in the total cost of specialism, a better distribution of the payments to specialists, and apparently, at least in the beginning, greater relative rewards to specialists than to general practitioners.[30]

Perhaps the least satisfactory and most wasteful system of payments relates to dentists. Here the fee system is used: *x* dollars for each treatment. The dentist may conserve teeth without special permission; but if, for example, he wishes to remove teeth and replace with artificial teeth, he must obtain permission. The important point is, however, that where the interests of dentist and patient are one (namely, more income and more work), the result is high costs to the program. In the first two years of the British program, dentists' incomes have risen way above those of practitioners; and despite two cuts in payments for service, incomes are still high.[81] New Zealand's experience with the fee system should have been a warning to the British. Underestimates of services likely to be demanded of dentists resulted in excessive fees for services and excessive incomes for dentists.

---

[29] London *Economist,* October 29, 1949, p. 934; *British Medical Journal,* March 18, 1950, pp. 664-666.

[30] Cf. London *Economist,* June 12, 1948, pp. 962-963, and December 25, 1948, pp. 1054-1055; and A.M.A., *op. cit.,* pp. 13-14; C. W. Rappaleye, *op. cit.,* p. 32.

Prevention of excessive funds going into dentistry and other abuses raise particularly difficult problems. First, because of the backlog; second, because of the difficulty of using a capitation system; third, because of the difficulty of preventing abuses in the fee system; and, fourth, with the great shortage of facilities, the tendency to concentrate on the most profitable work (e.g., adults) and to reduce the quality of services.

The difficulties raised by prior checks on costly operations are suggested by the following: "For example, there have been cases of estimates submitted for putting a jacket crown on a healthy root-filled incisor tooth which has in the past had an apicectomy successfully completed. The Board has insisted that the root of the tooth should be opened up, with a consequent risk of its reinfection, so that the cheaper type of post crown can be used, rather than allow the dentist to make the more expensive jacket crown."[82]

More Money for Health

One effect of N.H.I. is to channel more money into medicine. By virtue of its taxing power, the government forces the nation to spend more on medicine and less on other consumption goods or possibly on investment.

For example, below I present the consumption expenditures and prices of various categories of consumers' goods and services. The reader will note that the more favorable increase of consumption out-

CONSUMPTION EXPENDITURES AND PRICES, UNITED KINGDOM, 1948, TOTAL AND VARIOUS CLASSES
(1938=100)

	Expenditures	Prices
Tobacco	112	388
Alcoholic drinks	93	288
Durable household goods	79	236
Private motoring	35	180
Domestic services	37	218
Other services	120	154
All	104	182

Source: *National Income and Expenditures of the United Kingdom,* 1946 to 1949, Cmd. 7933, p. 32.

---

[81] See London *Economist,* May 28, 1949, p. 980; December 11, 1948, p. 962; and *The Practitioner,* pp. 55-56.

[82] *The Lancet,* p. 58.

lays for other services (includes medicine) and the relatively low prices for other services.

It is clear that large rises of prices in relatively nonessential areas of consumption have tended to reduce consumption of these nonessentials. When prices have risen greatly and consumption has increased or has been maintained remarkably well, the explanation is inelastic (insistent) demand. The rise of prices in these sectors of the economy stems largely from tax policy. For example, the increase of consumption for tobacco was 12 per cent; of prices, 288 per cent; but the rise of prices after allowing for the increase of taxes was but 50 per cent. From 1938 to 1949, tobacco taxes rose from 84 million to 610 million pounds; and all indirect taxes (consumption) rose from 412 to 1,675 million sterling, or from 47 to 45 per cent of all tax receipts—a proportion much higher than in this country.

All of this suggests that the British Government by a conscious tax and, to some extent, price policy has tended to discourage the consumption of tobacco, alcohol, durable consumers' goods, etc. and use part of the receipts to stimulate the outlay on medicine.

Here is perhaps the crucial issue of medical economics. The British people support a government which through its taxing and pricing policies drastically modifies the consumption pattern. As the *Lancet,* in response to critics of this country, puts it, the British people prefer shabby clothes plus adequate health service to inadequate medical outlays and better clothing. The Labour Government forces the people to pay much more for tobacco and alcohol, for example (partly in the form of higher taxes), and thus discourages consumption of these products and many other semiluxury products which would have been purchased with the tax money. The receipts are used to keep down the price of food and finance medicine and other security programs.

Few will dispute the fact that the diversion of spending from alcohol, tobacco, radio, etc., to medicine brings an improved pattern of spending. But many in this country will not approve governmental intervention in the field of consumption. Of course, even in our country the government exercises similar compulsions in outlays for education and even to some extent for health.

Summary and Conclusions

The new British Health Service Program has now been in operation more than two years. Physicians both in Great Britain and in this country seem divided on the issue of the successful outcome. At least this much is clear:

1. The effect is to channel additional money and resources into the health services.

2. Through appropriate tax and pricing policies, the government modifies the spending pattern in favor of medicine (and other social services) and against outlays for tobacco, alcohol, clothing, durable consumers' goods, and other commodities.

3. Additional medical service is not merely at the expense of more production or more desired goods and services. First, because more intensive use is made of existing facilities and personnel. Second, because diversions are made from luxury medicine. Third, because in part the consumption of less necessary goods is foregone. Fourth, because better health means less illness and higher output.

4. The pattern of spending the medical pound sterling has greatly changed. The explanation of this fact lies partly in the intensive use of services previously denied the masses—e.g., dental service (only 7 per cent availed themselves of this service under the previous insur- [illegible] program and almost one-half in a recent year); but in part the [illegible] stem from the abuses that develop under the system—e.g., exces [illegible] scriptions—and in part from the method of payment, designed [illegible] se outlays on hospital and specialist services.

5. It is not clear that the most effective system of payments has as yet been evolved. The objectives are the maintenance of required incentives, economies of total outlays, relative payments consistent with the required distribution of manpower, and the absence of obstacles to effective use by the insured. On these criteria, the practitioners probably require somewhat larger rewards; the dentists less; and the practitioners with small lists, higher per capita rewards for the first thousand (and related higher rewards in outlying areas). Possibly, a small charge for some services may be necessary to discourage waste. But this should be a measure of last resort.

6. There is no convincing evidence that the British cannot afford the 400 million pounds sterling being spent on health services. In relation to income, total and per capita, the outlays are less than in the United States. As a contribution towards inflationary pressures, the importance of health services has been greatly overestimated—and especially by physicians. The government for several years has been operating on a budgetary surplus; and the wherewithal to finance the social services has come largely from the beneficiaries. Higher taxes on consumption goods and on income paid primarily by the masses finance the increased services received.

7. British health services necessarily stress quantity, not quality. The objective was to make medicine available to all, not to a limited number. Perhaps the most tenable criticism to be made was the introduction of comprehensive services before some of the necessary facilities were available. It might have been preferable to postpone

some services or maintain small charges until dentists, nurses, hospitals, prosthetics, etc., were available in larger quantities. The deterioration in quality need, however, be only temporary.

8. Perhaps the most frequent complaint is that the general practitioner has lost position and financial status. This deterioration is partly the result of large demands on other medical services; but it is also the result of the pressure resulting from the availibility of practitioner's service without financial check. The physician earns more but not nearly in proportion to the additional work; and the specialist and the dentist have gained at his expense. Note, however, that in comparison with the factory worker, the British physician earns four times as much; in the United States, the proportion between earnings of physicians and factory workers is about the same. In the rate of pay for service, in the degree of association with hospitals, and continuance of some specialist work the practitioner can rightly expect some improvement.

9. As the program continues, we may expect much improvement: education of the people concerning rights and duties; satisfaction of backlog demands; improved distribution of physicians in response to differential rewards (e.g., higher pay), in areas of shortages, and control of entry; more careful scrutiny of prescriptions; improved structure of pay for dentists, practitioners, and specialists; growth of health centers, with their improved services and economies of operation; increase of medical personnel—all of these will help.

10. Finally, the British experience is one that all interested in compulsory health insurance will watch. The British have moved quicker than this country—in part because the philosophy of the welfare state is more generally acceptable in the United Kingdom and in part because, with much lower incomes, the need for an improved consumption pattern is much greater. Perhaps the most significant British mistake from which we might profit has been the introduction of comprehensive services before the required facilities were available.

VOLUNTARY AND COMPULSORY MEDICAL CARE INSURANCE

By Clarence A. Kulp
University of Pennsylvania

The sweep of the topic assigned to me, together with the time allowance, pretty much predetermines the shape and the level of this paper. To be able to cover the topic at all, the treatment will need to be qualitative or analytical rather than statistical or historical, though either of the last would present fewer difficulties. The qualitative approach in turn creates its own difficulties, and particularly with a topic as controversial as that of medical care financial policy. It is precisely in an area like this, indeed, that facts are scarcest. Not only are facts scarce, they are often unreliable and usually susceptible of more than one interpretation. For example, how much voluntary insurance have we in the United States against the medical care bill? (This paper does not include discussion of insurance against loss of wages resulting from sickness.)

Facts, it is true, as we ordinarily use that term, are of comparatively small importance in decision on issues such as those involved here, but this only increases our difficulties. Decisions are essentially political—political in the best meaning of that expression: the registered judgment of an active articulate majority of citizens. In coming to this judgment the essential question is not how much private insurance protection is there available to meet the medical care hazard but these that are much more complex and important: how adequate, how secure, how generally acceptable to the citizen is existing voluntary protection? Decisions on these questions depend not so much on facts as on the postulates or assumptions that each of us begins with and that so largely predetermine our conclusions. We could not of course hope to agree unanimously on these assumptions, even if we had thirty days rather than thirty minutes to discuss them. All the more reason that they be clearly stated. It is understood that every man will, and in a free society must, examine these assumptions. The purpose of stating them here is to make sure that while on matters as vital and complex as these unanimous conclusions are impossible, we shall at least not be working from unstated or partially stated postulates.

The assumptions that follow seem basic[1] in determination of medical care insurance policy. To this group these assumptions—except perhaps the second—may seem truisms; for the present purpose it is not necessary that we agree on them as long as they are clearly understood.

---

[1] For a more comprehensive list of assumptions including these, see C. A. Kulp, *Standards for Balanced Social Security Policy,* First Annual Insurance Institute, University of Nebraska, November 17, 1950.

The Assumptions

Assumption 1. American citizenship is one of obligations as well as rights and privileges. The corollary to this is that the time is past—if indeed it ever was—that our citizens could be divided into two permanent camps of those who have and pay and those who have not and receive.

Assumption 2. It is much more likely than not that the average American under existing medical care financial arrangements will soon or late be faced with unpaid medical bills or unmet medical needs. I assume, that is, the Williamson concept of presumptive risk, which bases the case for compulsory insurance (though not in the same way or to the same extent as I shall later suggest) not on the shifting sands of the availability, adequacy, and reliability of voluntary provision at a particular time but, as the phrase implies, on a realistic acceptance of the situation of the average man over a life time.[2]

Assumption 3. In making provision for financing medical care insurance, the state—small *s*—should restrict itself to that part of the medical care bill for which the average man does not provide and cannot be expected to provide minimum and reliable protection. Williamson, for example, would include under compulsory insurance not all medical care costs but only those he classifies as catastrophic for the average citizen.

Assumption 4. American medical care insurance policy must, as far as this is consistent with the insurance idea itself, be suitable and congenial to the American temperament. It is as important to preserve and encourage our incentives to self-help as to provide medical care insurance.

Assumptions 3 and 4 lead to the corollary that, quite contrary to the inference to be drawn from the general title of this session, the issue of medical care insurance in the United States is one that cannot be stated, or be soundly solved, in the too simple terms of an alternative. It is not one of either all-compulsory or all-voluntary insurance. The issue is much more accurately expressed, I believe, in the title of my own paper. It is one of how much compulsory and how much voluntary provision and in turn of how best to arrange the relations between the two. Discussion throughout will be in terms of the soundest place to draw the line between the province of compulsory and voluntary benefit programs and the soundest ways to co-ordinate the two, whether provided by state or private insurance organizations. Compulsory medical care insurance may or may not mean state insurance, although the two are often found in combination. The Douglas catastrophe insurance proposal, for example, would join compulsory coverage with private insurance of the medical care risk. Under quite different conditions, with quite different motives and with quite different results, both Germany and the United States have to a considerable extent distinguished the function of the state as prime mover from that of the insurer. Coverage and insurance issues are of course intimately related, and decision on either cannot be made without taking into account repercussions on the other; but for the sake of clarity and simplicity the discussion in this paper will center on compulsory vis-à-vis voluntary insurance and not on the kind of insurer that carries the risk.

---

[2] W. R. Williamson, *Journal of Gerontology,* January, 1946.

Granted the second assumption, that of unmet need for the average man (and the collateral assumption of the importance of medical care for all citizens), the case for compulsion by the state is for the greatest part conceded. Questions at least as important, however, remain. Compulsory insurance for whom? Compulsory insurance at what level of benefit? Indeed, to a considerable degree, the answer of most Americans on the compulsory-voluntary insurance issue will as a practical matter be made not on the naked question of compulsory insurance or no but on compulsory insurance for whom and how much?

The Scope of Compulsory Insurance

First, compulsory insurance for whom? For several reasons, it follows that if there is to be compulsory medical care insurance, it should be universal, covering all citizens or at least all employed and self-employed persons. This is partly because the concept of presumptive risks leads logically to the conclusion that since all citizens are exposed all citizens should have protection. If like the Europeans we finance the costs of compulsory medical care in part from taxes, there is another powerful argument for universal coverage—that of equity. It is simply not fair that a part of our citizens should be taxed to help pay for benefits for others which they themselves may need as badly as those who happen to be covered under insurance. If we are to have compulsory insurance of this hazard, the only sound coverage basis is that which assures all a minimum benefit to which all have contributed. The more fortunate will be able to supplement this with voluntary insurance; no one will receive less than the national minimum established by the compulsory system.

The answer to the question of how much—that is, of the scope of compulsory benefits and in turn of the field to be left to voluntary insurance—is more debatable. It depends on the extent to which we decide as a people that voluntary provision is reliable and adequate as well as available. In determining the extent to which voluntary provision can be counted on to cover medical care bills, the standards for testing reliability and availability should be high; for adequacy, low. Since despite state supervision the fortunes of private insurance organizations (which by definition supply voluntary protection) cannot but va over the decades (and this has been particularly true of those specializing in this field), voluntary insurance does not qualify as a way to assure a national minimum benefit, even for those fortunate enough at one time or another to have this protection. Insurance is either secure or it is nothing. As Assumption 2 implies, voluntary insurance also fails to meet the availability test. Like that for reliability, it is a stric test, and to conclude that voluntary insurance can meet neither is conclude only that, like all institutions, it has limits and that there a functions for which it is not perfectly suited.

Last, because it is vital that we give every possible incentive to help and voluntary insurance institutions (see Assumptions 1 and the standard for judging voluntary benefit adequacy should be modest. Even judged by these standards, the limitations of voluntary insurance as an exclusive program for meeting catastrophic medical bills are so great that compulsory insurance must be relied on to provide the national minimum. Compulsory insurance, however, requires supplementation by voluntary insurance. In what ways and to what extent the two programs can best be combined are the essential questions to be discussed in the rest of this paper.

Horizontal Divisions Between Compulsory and Voluntary Insurance

Some approaches to the problem of finding the right combination may be regarded as horizontal, others as vertical. First, horizontal. In social insurance, generally, it is agreed that benefits should be set at a level below that required to cover full loss. Where financing is shared by others than the insured this is particularly necessary. It is a logical corollary of acceptance of social insurance benefit as a national minimum. The horizontal limit on benefit may be applied as an upper limit in dollars per week. In cash benefit insurance paying for lost wages, for example, it is both necessary and practicable to preserve a margin between the claimant's usual wages and living standards and the benefit amount per week. It is necessary—this is entirely apart from financial reasons—because of the intimate connection between benefit level and the individual's incentive to get well and get back to work. It is practicable because such an upper limit on weekly benefit amount, the critical factor, permits and encourages provision of voluntary protection that will supplement the national minimum. Assuming that benefits are paid, as they should be paid, without limit on the number of weeks, compulsory insurance automatically covers catastrophic loss. The essential element of security lies essentially not in the benefit level but in the assurance to the claimant that the benefit will continue as long as he needs it.

The device we have been discussing is not generally suitable, however, for medical care benefits. For at least three reasons a horizontal upper limit on compulsory medical care is not sound. If the limit is expressed as a maximum number of dollars per week or month, it defeats the very purpose of the medical benefit; inevitably it centers attention on the price of the care and not on its adequacy and quality. We need look no further for proof on this point than to American experience with limited workmen's compensation medical benefits. If the limit is stated as a maximum dollar amount per claim, this leaves the catastrophe hazard essentially unprotected and the claimant can be cut off precisely at the time of his greatest need. (It may be necessary sometimes, as Blue Cross experience with maternity claims show, to make such a limitation, because otherwise patients and their doctors may demand unnecessary and unnecessarily expensive services simply because they have been paid in advance; but this, all parties agree, is a regrettable and they hope temporary departure from insurance principle.) Also, if Blue Shield and other private insurers are admitted as statutory carriers of the compulsory risk (both foreign and American experience assures they will be) and if doctors providing care to persons insured under these plans are permitted to charge fees scaled to individual patient income, as is frequently the case today, a horizontal maximum could result in an arbitrary and unfair distribution of the costs of insured medical care. Inequities would be compounded if in addition doctors serving insured persons should take the position, as they have been known to do, that insurance ownership itself is a sign of comparative affluence to be considered by the doctor in fixing his fee. Under an arrangement such as this, the insured does not in fact have medical cost security. The catastrophe hazard remains on him. Finally, such a maximum on the compulsory benefit might leave too little scope for voluntary insurance efforts, since private insurers could hardly be expected to interest themselves in insuring excess medical care costs. Up to now private insurers have not been interested in the catastrophe hazard; the single exception today writes only relatively well-to-do executive groups.

An advantage of the horizontal maximum is the ease with which it could be used with universal coverage. On balance its defects make it clearly unsuitable for American medical care insurance policy.

There is another and, I believe, a better way to place a horizontal limit on compulsory benefit: by excluding all but the most catastrophic medical care bills. One suggestion is to provide insurance only for diseases and disabilities agreed in advance to be catastrophic, listed in the law. Benefits would be exclusively in the form of provision of medical care, which would eliminate entirely the problem of fee-setting and the possibility of fee-padding inevitable in a program providing cash reimbursement of medical bills. The problems, however, of definition are so numerous, the subjective factor in medical diagnosis and prognosis so great, and the chance of arbitrary decision among individual claimants so numerous that it could hardly be adopted.

A much sounder application of the horizontal approach would be some variety of reimbursement insurance applied to medical catastrophe. The definition of catastrophe would need to be carefully thought out; but it could be made much more objective than one embodied in a schedule of diseases. In principle the dollar limit would be that amount per claim or per benefit year that represents a loss of income so great as to result in major impact on savings, individual or family, or on living standards, as specifically defined in the statute. The Douglas proposal, for example, would cover the cost of medical care in excess of 5 per cent of income or $150 a year, whichever would be the smaller. A research study under way under the auspices of an American university defines catastrophe as that situation in which the individual or "the medical spending unit" (a group of persons whose medical expenditures are paid from common funds) has expended 10 per cent or more of usual income for direct and indirect medical services during the year.

One enormous advantage of this variety of the horizontal approach is that it would cover completely the cost of catastrophic illness. Paradoxical as it sounds at first blush, this approach—that seems distinguished by what it leaves out—is nevertheless quite consistent with the requirement that the compulsory medical care insurance system provide a national minimum. In medical care this minimum can be expressed most soundly, not as a modest sum of dollars a week, not as payment of the little bills that fritter away insurance funds but that can and should be absorbed in the individual budget, but as complete protection, without dollar or time limit, against the personal and financial shock of medical catastrophe. Another advantage of this approach is that it would leave the rest of the field to commercial and other private insurers, whose interest to date has been, generally speaking, outside the area of catastrophic medical loss insurance. The catastrophe reimbursement benefit would consort logically also with a scheme of universal coverage. Finally, because it would provide not medical care as such but money to pay medical bills, it would interfere as little as possible with traditional doctor-patient relations. Assumption 4 requires a medical care insurance program for the United States that is acceptable to doctors as well as their patients. It would be naïve, of course, to suggest that the introduction of compulsory coverage and financing of medical care could or should leave patterns of medical practice entirely untouched; and the doctors are right in their contention that the proponents of compulsory medical care insurance have greatly oversimplified when they insist that the only change involved in compulsory insurance is a change in the way of raising the money to provide benefits. Doctors, too, will have to give as well as get, and they particularly will have to reorient that traditional medical attitude toward all issues that touch doctors that is suggested by their approval of Blue Shield as "the doctors' plan." If the catastrophe reimbursement approach is to work, it is essential that as for the upper limit horizontal plan (though continuance would not be as serious) doctors surrender their traditional privilege of scaling fees on the basis of the patient's presumed ability to pay; otherwise much of the advantage of and reason for insurance would be dissipated.

Vertical Divisions Between Compulsory and Voluntary Insurance

Several other possibilities remain. They represent the vertical approach to definition of the respective spheres of influence usual abroad. Broadly speaking, social insurance abroad has taken for its function protection of the working classes, leaving to private insurance the rest of the population; again broadly speaking, each program has been dominant in its own sphere. Over the decades the definiteness of the line between the two programs has become more and more blurred, primarily as a result of the slow trend to universal coverage, exemplified in the Beveridge program, partly as a result of the fact that European compulsory schemes have always in fact if not in principle left plenty of leeway for voluntary insurance as a supplement to low benefits. The fact remains that the typical European medical care plan continues to divide vertically the field and function of compulsory and voluntary insurance. Because it discourages and delays achievement of universal compulsory coverage and because implicit in it is the socially undesirable goal of providing complete compulsory protection for insured persons, Americans should and will avoid it. In that they both cover minor losses, in Europe both compulsory and voluntary programs attempt too much. At the same time both leave the average person unprotected against medical catastrophe.

Vertical division of function could also be arranged, it has been suggested, by programs differentiated by kind of medical service. It has been suggested, for example, that provision of hospital care or of benefits covering the costs of hospitalized illness be made the function of compulsory insurance, leaving arrangements for other medical care and costs as they are today. This proposal, that would provide *inter alia* a variety of medical catastrophe benefits, would probably be the easiest of all to introduce in this country, since the doctors could be left partly or entirely to one side, and the community hospitalization plans, already engaged in a semisocial function, are offering to serve as statutory hospitalization insurance carriers. The proposal has both advantages and limitations. Even if compulsory coverage for the hospitalization hazard were made universal from the start—it is very likely to be less than that—it would take us only partly along the road toward the ideal of a national minimum. It would provide no protection against nonhospitalized catastrophic illness. It could be arranged to cover the catastrophic costs of hospitalized illness but at the price of exaggerating present pressures on hospital staffs and facilities resulting from unnecessary hospitalization. Since the compulsory program would in all probability attempt to cover the whole need of the insured (except as individuals would continue to buy medical care outside compulsory insurance because of the real or fancied superiority of outside quality), the incentive to buy voluntary insurance as a supplement would be weak.

On balance, the argument seems clearly to favor the catastrophe reimbursement type of compulsory medical care insurance.

A final observation. This discussion has been about the ways and means in which compulsory and voluntary insurance could be combined. But even had we an ideal answer for this, it would still be for the medical insurance problem, not for the many-sided and immensely more complex problem of financing medical care. Insurance, whatever its strengths, is after all a mechanism with a limited objective and a limited function: to pool the costs of medical care on a formal prepaid basis. It is a useful device but it is not magic. It does not of itself add one penny of income to meet the costs of medical care; indeed, insurance requires additional expenditures to cover the cost of insurance administration. It is indeed so unsuitable as a device to handle the entire medical care problem that some would reject it entirely and turn to state-provided medical care on the current British model. In planning a medical care program for the United States, construction of hospitals and related physical facilities, a more efficient and equitable allocation of these facilities, and the education and training of much additional medical and related personnel are all more important than medical care insurance. Even in principle, insurance can contribute little toward these facilities; in fact it has contributed even less because insurance funds have usually not been sufficient to do more than finance cash and care benefits. In principle, compulsory medical care insurance could be used to promote and encourage preventive medicine; in fact, the world over, compulsory insurance institutions have restricted themselves almost exclusively to the far simpler task of providing benefits for those already ill.

A comprehensive medical care program must also include provision for the medically indigent. To that part of the program, insurance as such has no contribution to make at all, although, at the risk of breaking down the dividing line between tax-supported medical care and medical care insurance, it would be possible to use medical care insurers as the agents of the state in distributing medical care to the indigent. This service function could very easily be combined with universal insurance of the catastrophe reimbursement type. The entire population, including the medically indigent (whose number would be minimized as a result of universal coverage), would be automatically protected for catastrophic medical loss, the state contributing the funds necessary to cover benefits for the latter. Medical costs less than catastrophic for the medically indigent could be covered as now, or these could also be provided on a fee-for-service basis by a statutory insurer at state expense.

WELFARE IMPLICATIONS OF ALTERNATIVE METHODS OF FINANCING MEDICAL CARE

By JEROME ROTHENBERG
Amherst College

I. *Welfare Criteria*

A welfare analysis of medical care should be integrated with welfare analysis of the economy as a whole. The medical industry *is* "different." But medical care competes with other industries for productive resources and for the consumer's dollar. We cannot evaluate medicine in isolation. Thus consumer expenditure for medical care provides no criterion by itself as to the soundness of our medical establishment. Nor may we assume that any action which will increase medical care is necessarily desirable from the standpoint of our over-all standard of living.

Familiar criteria for optimum welfare within the economy as a whole are: (1) optimum allocation of resources in terms of medical and nonmedical employments; (2) maximum efficiency in the utilization of medical resources. A third, suggesting unique conditions in medicine, may be added: (3) minimizing the financial burden on consumers, subject to the first two criteria.

In nonmedical areas, our welfare analysis is tied to freedom of enterprise and consumer sovereignty. Except where we find immobilities or obvious wastes in a particular industry, we are inclined to accept the result of the automatic working of the market system there as representing a roughly optimal balance between technological barriers and consumer preferences. But this depends on some very special features of the forces acting in a typical market. Demand and supply in the medical industry differ significantly from the typical.

Demand. The money sums which consumers pay for the receipt of medical care do not represent consistent individual or group valuations of the benefits to them. These benefits are not strictly allocable to those required to pay. There is no tradition that each person shall pay fully for even whatever direct medical services he obtains.

Supply. Because of the diffuse yet "total emergency" nature of the benefits and the expensiveness of rendering them, substantial segments of the industry are organized on a nonprofit basis. Even activities carried on for profit are suffused with eleemosynary concern for medical needs as opposed to money demand. In addition, medical ethics and collective concern for the quality of care significantly modify free enterprise.

We must therefore recast the criteria given above to meet the uniqueness of the medical industry. I postulate giving particular emphasis to the following. First, therapeutic medical care arises out of the desire to be rid of illness. Illness is generally undesirable and unpredictable. Prevention is clearly preferable to cure; but so far prevention has had but limited success. Modern emphasis in preventive medicine consists often in treating serious illnesses early; i.e., efficient therapy.

Second, illnesses vary greatly in severity and with it—not exactly in one-to-one relationship—the extensiveness of medical care necessary. I submit that a useful qualitative distinction among illnesses be considered in terms of "serious" and "nonserious" conditions. A nonserious (or trivial) condition is one involving only a slight personal or family adjustment by those stricken, and only minor "neighborhood effects." The family's desire for medical care for such conditions is comparable to—and indeed integrated with—its desire for new shoes or a television set. Serious conditions may involve an almost perfectly inelastic demand for medical care, important neighborhood effects, or both.

As far as allocating resources to medical and nonmedical employments, guaranteeing at least enough resources to medicine to give good care to all those suffering serious illness promises greater total consumer satisfaction than any alternative allocation. In order that these resources actually be used to treat serious illnesses, subsidies may be necessary. Additional resources to medicine to care for nonserious conditions should—consistent with nonmedical needs—be left to the workings of the market: attraction of resources by the unsubsidized money demand of those stricken.

On the basis of this priority criterion, it should be possible to classify most illness conditions into the serious and nonserious categories. Extent of disability, contagiousness, sequelae affecting national productivity or future disability, the inexpensiveness and greater effectiveness of early treatment—these considerations should help us in classifying.

Consumer tastes are relatively unimportant in medical care. Also, there is a high degree of uniqueness of input combinations representing the best treatment for specific conditions (with the exception of luxury elements at the fringe, the best cures; anything less often fails to do so). Therefore, when we ask to guarantee good medical care for at least all those afflicted with serious illnesses, we are implicitly specifying a minimum necessary bundle of medical resources determinate within fairly narrow limits.

Third, efficient utilization of medical resources has two facets: minimizing the input cost of rendering a particular output bundle and maximizing the output bundle for any input allocation ("bundle" has quality and quantity dimensions). While related, these two are not identical in medicine because they are subject to the policy decisions of different groups.

In medicine, we are not free to envisage saving resources by lowering the quality of care. Less than highest quality care often represents a total waste. So the problem involves obtaining efficiency without sacrificing quality.

As far as minimizing input costs, medical resources should be neither over- nor underworked—a question basically of minimum average cost and maximum average productivity. For hospitals, this is complicated by dispersion of patient load over time. Such dispersion—under what might be expected as typical conditions—increases the total cost of caring for a given total patient load. Dispersion can be lessened by extending flexibility of accommodation, using scheduled waiting lists, etc.

As far as maximizing output bundles, the following are important: (1) incentives to personnel and facilities to evoke high quality care without wastes of overtreating; (2) advantages of specialization; (3) disadvantages of overspecialization.

This last refers to the danger of fragmenting medical care among dissociated specialized talents. We come increasingly to appreciate the importance of seeing the patient whole. The most notable movement in medical organization in this regard is group practice, which has the additional advantage of economizing expensive equipment and personnel.

II. *Model Systems*

Bearing in mind these generalizations, the rest of the paper will discuss the following models: private medicine—fee for service (no insurance); private medicine—voluntary sickness insurance; private medicine—compulsory sickness insurance; and socialized medicine.

In the first three models, I shall be dealing with the prevailing mixed patterns of organizing care by governmental, nonprofit, and proprietary groups and persons. In each model I shall be concerned with the financing of general medical care. I shall study each model in its hypothetical equilibrium state, in which we assume the implications of its peculiar character will have been realized. Transition problems are assumed solved. This method is obviously subjective, but I believe it to be superior to those involving historical comparisons alone.

A. *Private Medicine—Fee for Service (No Insurance)*. Under private fee-for-service medicine, a consumer incurs medical charges only if and when he obtains medical services, the amount depending on the extensiveness of care. The kind and frequency of care desired will depend on the consumer's record of illness. But illnesses are generally unwanted and unpredictable; moreover, once stricken, he has little choice of effective treatments. His need for medical care is independent of his income.

When struck by serious illness, he is often willing to spend "almost anything" to be cured or appreciably aided. But because good medical care is expensive, the consumer, willing as he is to pay heavy sums, may actually be required to do just that. Not everybody, however, is so burdened. The great majority of families at every income level experience no serious illness in any year. Their annual medical charges are low, well below average. But the small minority with serious illness spend sums considerably higher than the average, amounting to large percentages of their incomes. Savings are depleted, debts incurred, and many seek charity. The medical indigent population is a considerable one.

Another consequence is that consumers will tend to economize by seeking medical attention only when they think they are very ill. This discourages early diagnosis and treatment, and probably exacerbates both illness and expenses in the long run.

Why is medical care so expensive? First, fixed capital costs—the initial investment—for factors are very high. Hospital construction costs are heavy. Medical education is long and requires complicated equipment and talented detailed instruction. The student forgoes income throughout the whole duration. The education of doctors is the most expensive type of professional education.

Second, no real economies of large scale are possible. The market is local; the services are personalized and elaborate. No mere concentration of resources offers great advantages.

Third, no marginal cost pricing is employed. Because of significant factor indivisibilities, marginal costs may fall considerably short of average costs. But average cost pricing, with or without markup and with or without price discrimination, is preponderant. Besides, marginal cost pricing is inappropriate in a field saturated with resource immobilities and nonprofit elements, and where demand for care has very slight price elasticity.

While marginal cost pricing is not employed, prevailing sliding scales of charges impose a smaller burden on consumers than would any alternative uniform pricing practice under fee-for-service medicine, so long as poorer families remain unsubsidized. Even with subsidization, poorer families would be encouraged to leave an even larger percentage of ailments unattended than under the present system.

Aside from unequal consumer burdens, the chief problem is that medical needs do not correspond to ability to pay; i.e., to money demand. As a result there are areas of relative neglect. The more important is geographic.

Two facets of the provision of medical care must be distinguished: the availability of medical resources and their rate of utilization. In a community well stocked with such resources, reasonably adequate medical care can be expected for both wealthier and poorer inhabitants. Low marginal costs of operation and medicine's charity tradition combine to keep the poor provided. In communities badly provisioned, however, the wealthy may be able to obtain acceptable care—even this is doubtful—but poorer families get grossly inadequate attention. The medical care market is basically local; so the availability of medical resources to the community is crucial.

Availability appears to depend on factors like population density, mobility, per capita income, and number of rich families. Many of these are interrelated. Per capita income may be taken as central. Construction and operation of hospitals and diagnostic facilities cost money. Existence of such facilities and of a well-to-do patient body attracts personnel. The result is that facilities and personnel are concentrated in the large cities, in the wealthy areas. Rural, poor areas—especially in the Midwest and South—are seriously understaffed. Physicians' average income and work-load figures, moreover, suggest that the situation represents not simply an absolute shortage concentrated in certain areas but some degree of actual maldistribution.

The other area of neglect is medical. Despite the nonprofit and charity elements in medicine, chronic illness has generally received less attention than acute illness. Partly this is due to inferior ability to treat chronic illnesses; but also to the "nonproductive" reimbursement for such care. Contagiousness and the prospect of present payment or future productive work are largely absent to stimulate public aid. The marginal benefit for specific services is low, and under fee for service there is no evaluative mechanism whereby the social group may take into account the same patient's previous net benefits to society.

Consequently, medical care tends to be fragmented. There is little monetary incentive for group practice; but there is incentive for overtreatment by a multiplicity of nonintegrated resources.

B. *Private Medicine—Voluntary Insurance.* Voluntary insurance does not organize or provide medical care. As under fire insurance, the subscriber is buying exemption from a probability distribution of possible money losses by accepting a money loss known with certainty.

Under voluntary insurance the contract premium is typically uniform for all subscribers, with perhaps slight differentiation between group and nongroup subscribers. The risks within groups are not differentiated. As voluntary insurance attempts to cover more people, higher risk groups such as the aged will be encountered, and premiums may then be differentiated by risk. For the aged, though, the solution would seem to lie rather in the direction of contracts similar to straight or limited payment life insurance where equity accumulates over the life of the contract. Actuarial overpayments in early years permit underpayments or cessation of payments in later years.

Benefits differ depending on type of contract. Up to now, the great preponderance of contracts has been for hospital bills alone, although combination with surgeons' bills is gaining. This experience, moreover, has been achieved with the most eager customers that voluntary insurance is likely to have. In the absence of radical changes in medical practice, the hospital-surgical combination is apt to preponderate in an equilibrium situation.

Very briefly, these are some consequences of voluntary insurance as here characterized.

1. Marginal cost to the subscriber of some hospital procedures is far less than under fee for service. Greater hospital utilization is to be expected, both for serious and nonserious conditions. The increase will be limited by the fact that not all costs incurred in hospitalized illness are covered by the insurance contract.

2. Subscribers, while not able to budget for medical care on fee-for-service basis, are able to budget under voluntary insurance. Under fee for service, no provision which the family might make to meet the cost of an unknown burden of illness can be an equilibrium position. Even reserving the mathematical expectation of medical charges is inappropriate, since the onset of serious illness may financially cripple the family.

Under insurance, however, by simultaneously buying up the separate unpredictable risks of many persons, the fund can set up a meaningful mathematical expectation of medical charges per subscriber. Each subscriber is enabled to confront a certain loss no matter what his own actual sickness experience. Some gain, some lose, but each is almost equally likely to gain before the fact; and the loss represents the real cost of being free of uncertainty.

3. The cost of medical care is spread over the healthy as well as the sick in the insured population, thus shifting part of the burden from seriously sick to those not so stricken. As a result, under the reasonable assumptions of generally decreasing marginal utility of income and random distribution within each income class of marginal utility of income functions, the total financial burden of illness is decreased.

4. Subscribers who otherwise would be medically indigent are generally better off, but the small proportion living where charity standards are very lenient will be worse off. Such leniency, however, encourages consumer irresponsibility if insurance is available, because by remaining uninsured these families are gambling with other people's money.

5. There will be some decrease in the medical indigent load. But a sizable group of persons may be expected to refrain from buying voluntary insurance. The possibility of a "free ride" as medical indigents, optimism about health, high gambler preference, high uniform premium, and irrational prejudices may all induce poorer families to gamble.

6. Very slight geographic shift of burden from poorer to richer communities may occur. Most insurance plans cover only a small area, within which there is no appreciable difference in illness incidence or income distribution of subscribers.

7. No appreciable redistribution of medical resources will result. Insurance, by spreading sickness costs among healthy as well as sick, will improve operating incomes of facilities and personnel. But the improvement is not likely to be substantial and there will be little additional financial strength for increased capital commitments to facilities.

8. Lowering financial barriers to the care of illness in hospitals will tend to distort medical treatment into overutilization of hospital facilities to the relative neglect of cheaper but no less effective modes of care.

A last word on the strategy of premium and benefit levels under voluntary insurance. From the consumer's point of view, insurance appears to be worth while chiefly because it will enable him to avoid financial catastrophe in the event of serious illness. Thus to achieve maximum consumer participation, a contract covering only all basic costs incurred in hospitalized illness (perhaps in ward accommodations) should be available to poorer families. In this regard one such contract might exclude all normal maternity benefits but include benefits only for maternity complications (like the practice of Group Health Association of Washington, D.C.). Maternity, in being subject to family planning, is not a strictly insurable condition anyway. Excluding these benefits would enable cuts of roughly 15 per cent below current Blue Cross premiums. The encouragement of large families for the poor could be left to alternative contracts or, more appropriately, to public policy.

C. *Private Medicine: Compulsory National Sickness Insurance.* Compulsory insurance may take many forms. The only characteristics which

I feel can be assumed to be common to all forms are legally mandatory membership for every family within the affected population group and financial liability benefits as with voluntary insurance. The insurance fund does not organize or itself render medical care.

I should like briefly to mention characteristics which differentiate such plans from voluntary insurance.

1. *Financing*. Premiums need not be uniform or vary with individual or group risk. Also, the system need not be actuarially sound. Although pay roll taxes are most often advanced as appropriate, there is reason to prefer simple additions to federal personal income tax (perhaps with somewhat lower progressiveness than the base) with local government contributions. The pay roll taxes proposed involve serious administrative problems when a large proportion of the population is to be covered. Employer and employee contributions are thought to be regressive, the employer portion having potentially poor employment effects. In addition, the tax-consciousness engendered may lead consumers to abuse the system. A compromise for political feasibility might involve nominal contributions with the bulk of financing coming out of general revenues.

2. *Coverage*. Any percentage of the population can be covered. Ensuring adequate benefits and equity of treatment and making the advantages of insurance widespread recommend total coverage within the single government plan. Parallel operation of voluntary plans with the government plan assuming residual responsibility is probably too difficult administratively. The shifting of the medical care burden from the sick to the healthy will be made general; but there will be a differentiation in this shift: the sick poor will gain more in absolute amount than the richer sick; the healthy richer families will lose more than the healthy poor.

Compulsory payment of taxes to the system would not preclude a consumer making arrangements for medical care outside the system. The equity involved here is like that in public education.

Because of compulsory membership, it is claimed that the system is coercive. For wealthier families this claim has merit, although they would probably welcome insurance if the tax progressiveness were less than prevailing price discrimination. But for families with less than average incomes—representing probably the bulk of those uncovered by voluntary insurance—the claim is dubious. Under the charity tradition in medicine, uninsured poorer families may fall upon public support when seriously stricken—they "coerce" hospitals, doctors, other patients, philanthropy, and taxpayers at large into bearing their responsibilities. Many of these, too, would welcome insurance on favorable terms. Others gamble on getting a "free ride." For this latter group, public coercion represents a correction of individual irresponsibility which adversely affects others.

3. *Benefits.* The benefit level may be set wherever desired. Comprehensive care seems most desirable, for although hospitalized illness alone may appear sufficient to the consumer, this discourages economical medical practice. Moreover, it does little to emphasize early diagnosis and other aspects of preventive care.

Comprehensiveness of benefits does not mean equal priority for all illness conditions. Utilizing the serious-nonserious classification developed above, I shall examine the problem of priorities under comprehensive insurance below.

4. *Centralization of Administration.* Under national insurance, the administration may be centralized in various degrees. Voluntary insurance is largely set up under independent smaller-than-state units. With integrated administration, high uniform benefit standards, and a pooling of all insurance revenues into a single national fund, national insurance can bring about improvements over voluntary insurance:

a) Enrollment benefits to consumers. Consumers are covered wherever they live. There are no uncovered waiting periods and no loss of membership because of unemployment (due to income tax financing).

b) Economy of administration. Administrative machinery need not be duplicated under integration; administrative units can be as large as justified by efficiency; unique centralized services can be performed. On the other hand, these are somewhat offset by procedural duplications necessitated by multiple levels of control. To minimize this, much decentralization should be provided.

c) Geographic shifts of burden and resources. Voluntary insurance can do little to redistribute medical resources or the financial burden of medical care from poor to rich areas, because the financing and utilization of such resources are left wholly to the finances of the localities themselves. Under voluntary insurance, each community gets only what it can afford to pay for, but under national insurance, a community is not restricted to its own monies: it may share out of the general fund. As a result, the general shift of burden from the sick to the healthy, with its side shift from rich who pay more to poor who pay less, involves wealthy areas subsidizing poor areas. The extent of the subsidy depends on relative incidences of illness and the degree to which additional medical resources are attracted to poor areas. Operating revenues of resources already established in these areas will probably increase sizably; philanthropy and taxing powers may be relieved. But these are only permissive factors. There is no guarantee that communities will want to expand medical facilities. Besides, even expansion may not be enough to lure doctors from the attractions of metropolitan practice.

The advantage of giving federal aid through an "insurance system" is that operating funds are advanced to each area on the direct basis of its need for medical services. No additional political influences are needed. Capital grants are not hereby precluded.

5. *Compensation of Resources.* Methods other than fee for service can be effectively used under national but not under voluntary insurance. Resources can also be paid by capitation or salary. The capitation method seems most desirable. Most doctors strongly oppose a salary basis. They feel that their status would fall to that of a civil servant —an employee of the state. The use of salaried compensation might seriously lower practitioners' morale and sap their incentives to give high quality medical care. It would do nothing to encourage preventive care. Its only advantage is that it would require the smallest administrative load.

Fee for service has been most preferred by doctors; but its use would involve detailed reporting by doctors on every case; hence violating doctor-patient confidence, enlarging administrative apparatus, and requiring supervision over the practitioner's medical work. It would encourage overtreatment but do nothing to encourage preventive care. It might encourage the opposite.

Capitation would not require reportage. Full responsibility for diagnosis and treatment would belong to the practitioner. Because the doctor's marginal revenue for a procedure is zero, he has no incentive to overtreat patients. If there is no serious shortage of doctors or overutilization by consumers and if capitation rates are not low, this incentive can be channeled to stress preventive care. Lastly, capitation imposes no financial incentive against group practice. In fact, the greater the operating efficiencies of group practice, the greater will be its positive attraction under capitation.

The basic compensation of hospitals should probably be remuneration of total costs (including depreciation). Marginal costs are inappropriate; so-called "inclusive" costs might result in undesirable stinting of hospital services; the separate financing of stand-by and inpatient variable costs is irrelevant, unless the variable element is part of a scheme designed to press down hospitals' costs. Such a scheme is dangerous under a system where the insurance fund is the hospital's sole source of revenue (the role of philanthropy is problematical). Economy should probably be left to internal control by trustees and staff.

The Distribution of Medical Services. Probably the most important difficulty under national insurance is that of distributing medical care among applicants.

Under fee-for-service medicine, despite the mollifying effects of price discrimination and third-party charity, the positive cost to the consumer of each additional medical service acts as a disincentive to his seeking the best possible care for every trivial complaint. But because of the gamble and the fallibility of self-diagnosis and the separation of medical needs from money demand the disincentive is too strong and resources are distributed badly: too few preventive and diagnostic services and inadequate care for some full-blown serious illnesses. The distribution of the patient load among medical resources reflects to some extent pre-emption by income as well as by need.

Under voluntary insurance, the major change is that additional hospital services will be sought—some at the expense of nonhospital services. Fee-for-service disincentives for the care of the bulk of trivial ailments will remain.

Under national insurance as so far outlined, all disincentives will be removed. What can ensure that medical resources will not be swamped by trivial complaints, that specialists will not be sought unnecessarily, and that these pressures will not force an overexpansion of medical resources at the expense of other productive areas? Part of the answer lies in internal professional controls. But a financial mechanism is advisable to strengthen these defenses. The key would appear to be to impose coinsurance features into the insurance system. Coinsurance should apply only to nonserious illnesses and must be consistent with income tax financing and capitation reimbursement.

The following administrative mechanism, sketched briefly—in effect a point rationing system—might meet these objectives.

Point Rationing System. Consumers would pay medical resources directly for all services with nontransferable, dated, signed, and addressed coupons of two kinds: one for serious and the other for nonserious conditions. Diagnosis to classify a condition would be considered serious. Specialist and hospital services would be by referral only; so that patients know beforehand in which category they fall. Point prices would be based on quantity of services. Upon periodic issuing of new coupon books, consumers would pay cash for old nonserious coupons not returned to the insurance office but not for serious coupons spent. Rates would be small, for disincentive only. Medical resources would turn in all coupons received. In addition to basic compensation, practitioners (and perhaps druggists) would receive cash for nonserious coupons but not for serious, to avoid collusion with consumers. Consumers would be protected by the administration calculating serious-nonserious work-load ratios for all resources and investigating decidedly low ratios.

D. *Socialized Medicine.* Space does not permit more than to differentiate socialized medicine from compulsory national insurance. Socialized medicine involves government ownership of facilities and an employer relationship with all medical personnel. The government organizes and renders care. As such it may determine distribution of medical resources and the burden of care. It is faced with problems similar to those of national insurance with regard to over-all financing and distributing care among applicants. The chief issues concern the complete antagonism of the practitioners who would have to work under the system and an evaluation of socialization in general.

DISCUSSION

Frank G. Dickinson: This paper by Professor Harris is a very concise statement of some of the economic effects of the British National Health Act. In fact it has both the virtue and the vice of strictly economic analysis unleavened by consideration of experience with medical practice. It is strictly short-term both in its analysis and in its forecast of changes that may be expected.

The detailed analysis of costs and the changing character of medical expenditures is very useful indeed. The interpretation of the statistics is confined to those facts on which an economist can rightly pass judgment. And while these selected effects of the health scheme are impartially presented, it seems to me that Professor Harris counts rather heavily on time to remedy defects which his own analysis shows to be caused mainly by financial stringency and human frailty. If the general practitioner has been pushed into an unfavorable position relative to other medical service personnel and if, as Professor Harris says, one of the principal needs is for more money for the general practitioner, where is it to come from? If hospitals are overcrowded, where is the money to build new ones to come from? How are the hypochondriacs to be separated from those seeking early diagnosis of serious illness?

But most serious of all, how is merit among medical personnel to be rewarded? The fee-for-service system, despite its alleged shortcomings, rewards those who excel. The British health scheme puts a penalty on careful, time-consuming diagnosis and treatment. As Professor Harris states, "the physician tends to depend less on history, clinical observations, and the like and more on snap judgment and medical prescriptions." It may well be that deterioration of quality has not been serious yet, but I wonder what the effect will be when those doctors with previous training and experience are replaced by those with no experience in the "old school." No responsible person in this country urges that our medical schools return to the standards of 1900, when hundreds of diploma mills turned out graduates quite ready to make snap judgments but hardly fit to practice scientific medicine. A British doctor who must always hurry simply cannot maintain high standards. I believe that emphasis on quantity rather than quality is self-defeating. Experience with compulsory health insurance in other countries reveals that rather than decreasing illness and absenteeism, the number of days per year lost per worker to these causes has steadily increased in those countries while medical progress has advanced by leaps and bounds.

I would like to say only a few words about one of the "wastages" to be eliminated by the health scheme. Monopsonistic buying by government may eliminate some selling and advertising expense but the procurement experience of our own government does not augur well for efficiency. Moreover, the "careful listing of medicines and drugs available under the scheme" is as direct an invasion of the methods of practice of medicine as can be imagined.

Finally, I would like to suggest that the British experience with a compulsory health system is not too helpful to us in the United States. As Professor Harris states, the philosophy of the welfare state is generally more acceptable in the United Kingdom than here. Furthermore, we have no crisis in hospital economics such as faced the British at the end of World War II. Our medical care institutions are going concerns, whereas the British had to both replace bombed-out hospitals and reorganize many existing ones. There is no health crisis in this country that calls for government direction of consumer expenditures from recreation to medicine. We have the opportunity to improve our medical care and its distribution by means far less drastic than the one the British people have chosen.

The sum and substance of Professor Harris' paper is the old Chinese proverb, "Make haste slowly." He really thinks the British moved in the right direction but moved too hastily. He apparently subscribes rather wholeheartedly to what might be sharply termed "the poor dumb peasant theory." The British people should not be permitted to spend their money as they see fit, but priority should be set up through a system of taxation in order that medical care shall become a "must" item in the British family budget.

I have defined cradle-to-the-grave (to which Harris refers in his quotation from the Beveridge Report) as a scheme whereby those close to the grave would fasten themselves on the pay checks of those closer to the cradle and ride piggy-back, or piggy-bank, to the grave. The British may subscribe to this doctrine but I do not believe Americans do generally. They have not yet succumbed to a plan to rob youth.

Harris underestimates the importance of the hospital crisis in England which was the main reason for accepting socialized medicine. Physicians' incomes in the United States have risen almost but not quite as rapidly as per capital national income since the base period, 1935-39. Harris never quite answers one of his leading questions, "Can the British afford these large outlays?" Should the wealthier nations spend a higher or lower percentage of national income on medical care than poorer nations?

Finally, I firmly believe that the British experience provides no guide for a plan of action for the United States. I would add two reasons to those Harris has presented. First, about 38 per cent of their voters are more than fifty years of age as compared with only 33 per cent of our voters. Second, their tight little island provides no health contrast such as infant mortality among American Indians, maternal mortality among Negro mothers, and the long-lived Swedes of Minnesota who live longer than the Swedes in Sweden.

Professor Rothenberg has presented a discussion of the economics of medical care under several theoretical systems of payment. In the definition of terms and the careful enumeration of results which may be expected under various conditions of medical practice the paper is very valuable as an outline of the alternatives which now present themselves—although I do not think that the possibilities of further development of so-called "voluntary plans" is carried nearly far enough, especially in comparison with the lengthy discussion of compulsory insurance.

I wish that Rothenberg had carried his separation of illness into serious and nonserious a little further into the realm of what may practically be done to implement this idea. For example, it may well be possible to set up a type of insurance using the $50-deductible feature now commonly used in automobile insurance. I also regret that Professor Rothenberg seems to have forgotten his earlier recommendation that "nonserious conditions should—consistent with nonmedical needs—be left to the workings of the market" when he concludes that "comprehensive care seems most desirable, for although hospitalized illness alone may appear sufficient to the consumer, this discourages economical medical practice."

I think it is important to point out the different emphasis which is placed on quality of medical care by Professor Rothenberg as compared to Professor Harris.

The four separate discussions (of private medicine—fee for service; private medicine—voluntary sickness insurance; private medicine—compulsory sickness insurance; and socialized medicine) are, as Professor Rothenberg states, subjective analyses. And although historical comparisons were purposely left out, I believe that this approach results in a treatise so isolated from everyday experience as to leave one without a sense of direction. A discussion of methods of payment for medical care should involve more than just the welfare of the individual patient. Since Professor Rothenberg apparently recommends compulsory health insurance, I think it is incumbent on him to justify taxing all the people for medical care and depriving them involuntarily of other consumer goods.

Now for some short comments on Rothenberg's paper. There are many quotable sentences and phrases in this paper which I would call good writing.

He says that he is not going to do something and then turns around and does precisely that; for example: "We cannot evaluate medicine in isolation." It seems to me that he does take the problem out of its setting several times.

In contrast with the speakers at the earlier session, he does say that group practice is not an unmixed blessing because it can, but need not, encourage overtreatment.

I commend the reasons he gives for people not buying voluntary health insurance to the sales organizations of all voluntary health insurance companies and plans. I think they could build a good sales talk on these reasons. The people who cannot afford the Blue Cross and Blue Shield types of insurance are those who cannot afford the premiums—although for an entire family these premiums rarely exceed the price of a pack of cigarettes per day.

His attempt to draw a fine line between socialized medicine and compulsory national health insurance—mentioned in his last paragraph—reminds me of the claims in 1941 that we could have price control without consumer rationing. But we did have rationing!

This is the most theoretical discussion I have ever heard by Professor Kulp. His thesis is built upon four assumptions to which at least one more assumption should be added to provide reasonable support for his conclusions. That fifth assumption is that no one at any time in our economy has any personal savings.

These assumptions take one away from the realm of reality, largely because

Professor Kulp has not tackled the hard problem of applying these assumptions to the purchase of goods and services which human beings need, or at least think they need. For example, are they applicable to the purchase of food, clothing, and shelter? If not, why not? If they are generally applicable, then they lead inevitably to the conclusion that the only solution for unmet needs for all goods and services is compulsion. This is another variant of the Harris thesis to which I have referred, somewhat more sharply than I should, as the "poor dumb peasant theory." Professor Kulp leaves no alternative but compulsion as the royal road to providing the last dollar of funds to pay for the last dollar of cost for all goods and services. I should like to ask this eminent student of insurance if fire insurance is unsatisfactory because the loss not infrequently exceeds the amount paid by the insurance company. Then is compulsion in order on fire insurance?

Can a society remain free under government compulsion for the payment of this last dollar of economic loss? Can a more effective method of bringing about totalitarianism be invented than to prey upon the Americans' love for insurance? I am sure Professor Kulp will not misinterpret that question.

Let us return to his assumptions, particularly the second: "It is much more likely than not that the average American under existing medical care financial arrangements will soon or late be faced with unpaid medical bills or unmet medical needs." Then he states: "Granted the second assumption, that of unmet need for the average man (and the collateral assumption of the importance of medical care for all citizens), the case for compulsion by the state is for the greatest part conceded." Tie these two sentences together and you have the gist of his paper: if we assume one thing, we conclude another. In other words, I specifically charge Professor Kulp with having assumed a conclusion.

But let us leave the question of logic at that point. Does he not offer an alternative solution to his alternate solution? If private insurance can be trusted to take care of the small claims and thereby supplement compulsory coverage of large claims, why could we not eliminate the necessity of using compulsory insurance at all if private insurance is that good? Cannot we accomplish the goal by raising the limits of coverage of private insurance? Blue Cross now pays about 82 per cent of the average hospital bill and the difference is due, in part, to luxurious accommodations. Would Professor Kulp be satisfied with 90 per cent? After all, we have only been working seriously at voluntary health insurance for some two decades. The average reimbursement on physicians' bills, which do not usually come in such big chunks as hospital bills, is considerably less than 82 per cent.

Finally, although it may seem somewhat out of keeping with Professor Kulp's theoretical discussion, might I note that the largest Blue Cross claim paid during 1949 was $5,578.80 on a hospital bill of $6,273.71 and the highest during 1950 was $7,512.40 on a hospital bill of $7,804.92. Likewise, the highest claim paid by a Blue Shield Plan in 1949 was $1,771.00—all but $40.00—of the total physicians' fees for a man in California who was badly burned. So the alternative to the alternative is to keep working toward better coverage of our voluntary plans without risking a complete change in our way of life.

RALPH H. BLODGETT: I should like to devote my discussion time primarily to the question of cost—and especially the cost of compulsory health insurance.

I am not disposed to quarrel very much with Mr. Rothenberg's preamble on welfare economics. I do question that it would be readily possible to work out an acceptable and useful classification of ailments in terms of serious and nonserious, and I am not sure that the best treatments for all serious ailments are determinate within rather narrow limits. However, I should be satisfied to have agreement on these points specified as a prerequisite for the installment of compulsory health insurance, since that requirement might keep us safe from this project for another generation.

The treatment of the relatively well-known characteristics of private medicine with fee for service and with voluntary insurance will be passed over with only the comment that, if what we need is protection against the major catastrophes of medical expense and not the odds and ends, voluntary group insurance may come to do the trick and should be within the reach of most families. A family can purchase Blue Cross or Blue Shield membership paying the bulk of hospital bills and in-hospital medical bills for about twenty cents per day—the price of a bottle of beer or a pack of cigarettes.

The amount of the total cost to be allocated is of considerable importance in discussing methods of financing compulsory health insurance. It seems to me that the probable cost is frequently underestimated greatly. In 1949, we spent about 4 per cent of the national income on medical services. And yet Mr. Oscar Ewing, in his volume on the nation's health, suggested that compulsory health insurance could be financed basically by a 4 per cent tax on wages and salaries up to $4,800 and on the incomes of the self-employed up to the same figure. Four per cent of a part is less than 4 per cent of the whole. If medical services are now inadequate, it is difficult to see how they could be made adequate with a smaller total expenditure.

The actual cost of compulsory health insurance would depend on several variables, including the efficiency with which the government operated its ventures in general, the number of people covered, the number and kinds of medical services and facilities made available, the extent to which people made use of the system, the number of governmental payrollers involved in addition to medical personnel, and the volume of abuses that developed. The last factor mentioned would include simple overuse of medical personnel and facilities, but I am not sure that this is all it would include. Neither am I completely enthusiastic about Mr. Rothenberg's point rationing system for preventing abuses.

In any case, I am rather sure that we could not give people all the medical services they want or think they should have for much less than double the amount spent last year. And, since the proposed base for pay roll taxation would be less than the total national income, it might well take a 10 per cent tax rate on wages and salaries up to $4,800 and on the incomes of the self-employed up to the same figure to finance the project. Such taxes would scarcely be politically feasible, whatever might be thought of their economic advantages and disadvantages.

In all probability, then, the necessary funds, or most of them, would have to be taken from general revenues, and this means primarily from the proceeds of income taxation. Indeed, some people would favor this solution in principle. In connection with it, however, I should like to call your attention to a few matters. This method of financing would bring compulsory health insurance clearly into the open as a device for redistributing income—for taking from some and giving to others. It could no longer be referred to as "just insurance" or as a device for getting the individual to prepay his medical bills. It is part of a general redistributive program. The people who took out a great deal more than they put in could probably be educated to like the system here as in England, but what of the others? The fact that redistribution can be practiced to some extent within a capitalistic system does not mean that it can be carried on without limits.

Compulsory health insurance seems to be related to the widespread notion, probably mistaken, that all people must be made equal in all respects if we are to obtain a really democratic society. Do some people stand out from the rest because they have a high school education? Then everyone must have one. Do some then stand out because they have college degrees? Then everyone should have such degrees. Do some people stand out because they receive superior medical services? Then everyone must have equal access to medical services and facilities. A noted educator proposed that we should solve the problem in collegiate education by conferring the bachelor's degree on each American at birth, thus setting our higher educational institutions free for educational activities, but no such easy solution seems available in the case of medical services.

The cost of compulsory health insurance could be borne readily by itself, but it should not be considered by itself. Rather it should be considered in conjunction with all the other projects and expenditures of government, which are giving us as heavy a burden of taxation in peacetime as in wartime. We have started in a direction which might bring us eventually to a position like that of a family which engaged in installment purchasing until the monthly payments exceeded the family income. And like such a mythical family we should discover that we had lost all freedom and flexibility in the utilization of income, and that the total package of commodities and services received was far from completely appropriate to our wants. If we are not careful, we may see the day when the government, instead of withholding taxes, will just take our total incomes and later forward to us any small change that we may have coming.

The really basic issue seems to me to be the kind of an economic system we want to have in the future. If we yearn primarily for stability and security and think that social welfare can be maximized by a rather equal distribution of the income which we are already capable of producing (or even somewhat less), we can go in for a number of security and other projects and the taxes necessary to finance them. On the other hand, if we want continued change, innovation, progress, increasing production and income, and rising standards of living, there are some things which we must be careful about. We must not protect the individual from insecurity to such an extent that he would just as soon not work. We must not fix up our total tax bill and the kinds of taxes levied in such a way that people have little incentive to make large incomes before taxation, that businessmen see no reason to start new enterprises, that potential investors will not invest, or that young and growing enterprises, which need their earnings for expansion, will be discriminated against as compared with old and well-established enterprises. There is danger that we shall drift into a certain type of collective economy without ever having declared ourselves in favor of it.

CARL T. ARLT: The three papers presented agree substantially on the necessity for some form of compulsory insurance. That the logic of the case supports this reform in the financing of medical care is a conclusion with which I heartily agree. Professor Harris suggests that the British experience justifies the principle of compulsion even though it appears that a mistake was made in introducing a comprehensive scheme before the required facilities were available. Professor Kulp points out that the "case for compulsion by the state is for the greatest part conceded." Professor Rothenberg submits the thesis that financial protection against serious illness cannot be secured in a voluntary system where fees for service and high-level premiums for voluntary prepaid insurance exclude those of low-income status.

It seems to me the problem before the American people no longer involves a choice between voluntary insurance and compulsory insurance but rather a choice as to the degree or scope of a national health insurance program. Furthermore, the British experience indicates that the decision to institute such a plan involves equally important decisions as to the method of compensating doctors and as to when such a program should be established in view of the current inadequacy of medical facilities in terms of quantity and distribution.

I should like to comment on the question as to whether a national insurance program financed by special pay roll taxes and/or higher personal income taxes should make it possible for all members to secure medical attention for all types of needs—preventive, nonserious, and serious—without the imposition of additional charges on the patient.

It has been suggested that a small charge be made for each visit to the doctor, dentist, and hospital in order to reduce the number of needless visits to medical facilities, and that, in the interest of limiting the costs of a comprehensive national plan, distinctions be made between serious and nonserious or normal and catastrophic illness with the idea that compulsory insurance provides complete protection only against the serious and catastrophic medical emergencies.

There are, I believe, two serious dangers associated with the refinements mentioned. In the first place, to make the appropriate distinctions with reference to nonserious and serious illness or to determine whether or not a person has spent more than 5 or 10 per cent of his income on medical care and thus to determine his eligibility for medical catastrophe benefits, would involve tremendous bookkeeping detail and administrative complexity that would be added to the paper work normally associated with any scheme of national health insurance. The proponents of national health insurance must guard against undue complexity of administration.

A second danger, more serious than that of excessive complexity, is that the imposition of deductible insurance features or special fees for visits to doctors, hospitals, etc., will discourage some people from getting early and necessary treatment. The demand for preventive care and care for nonserious illness is highly elastic and most sensitive to any specific charge for medical care.

Determining the most efficient method of remunerating the doctors is another difficult problem in the administration of a compulsory national health program. It is generally agreed that the fee-for-service type of payment is least satisfactory in that it requires detailed reporting by the doctors and encourages overtreatment and high costs to the program. The capitation method is likewise not wholly satisfactory in that it encourages practitioners to seek patients; thus creating a situation in which clients may be badly distributed among the various doctors. This seems to be the case in Great Britain with reference to the general practitioner. The most efficient method, it seems to me, is the use of salaried compensation. It would involve a relatively smaller administrative problem and could be flexible enough to encourage younger doctors and develop a better distribution of doctors throughout the country. The major difficulty, of course, is that doctors vehemently oppose such a method of payment. We are told that incentives would be destroyed and that the quality of medical care would therefore decline. It should not be forgotten, however, that the bulk of medical research, the innovations, and the rising quality of medical care are, for the most part, a product of salaried employees of medical research groups and universities. There seems to be sufficient evidence to suggest that fixed salaries with merit increases would not seriously undermine the medical profession. On economic grounds, the salary concept warrants further consideration. On tactical grounds, of course, the unified opposition of doctors may be a sound basis for rejecting such a method of payment.

The current inadequacy of medical facilities and the pressures created by a war economy pose a practical question: Should we, assuming a measure of agreement on the desirability of compulsory health insurance, push for immediate adoption of such a program?

The lesson of British experience points to the necessity for greatly expanded and better distributed medical facilities as a prerequisite for effectively functioning comprehensive insurance. Because the philosophy of the welfare state is not as generally acceptable in the United States as it is in Great Britain, it is much more imperative that we guard against operational mistakes that might turn the weight of strong political pressures against the whole idea of compulsory health insurance. The supporters of comprehensive health insurance might well consider plans to strengthen medical schools, train more doctors, and develop medical facilities and thus set the stage for the adoption of the compulsory financing of medical care. In this connection, it should be noted that federal support in the form of low-interest loans to co-operative health groups might go a long way to improve the distribution of medical facilities.

The current pressures of a war economy make it unlikely that the American people will consider sweeping changes in the financing of medical care. Increased outlays for a medical program and the diversion of capital, materials, and labor into medicine would add to the pressures on a severely strained economy. This is not to imply that the United States cannot afford a comprehensive program at the present time. It is merely to suggest that the political realities of the situation indicate that the public will be unwilling to assume the additional burdens involved.

ECONOMICS IN GENERAL EDUCATION

ROUND TABLE ON REPORT OF COMMITTEE ON THE TEACHING OF ELEMENTARY ECONOMICS

Difficulties in Teaching Economics—What They Are: LAURENCE E. LEAMER: The Committee on the Undergraduate Teaching of Economics and the Training of Economists submits its report to us, the teachers of economics, with the hope that "it may stimulate, and serve as a basis for, a series of departmental discussions everywhere in this country that economics is taught to undergraduates." Your panel feels that we might appropriately begin this nation-wide discussion by reviewing some of the basic difficulties in the teaching of undergraduate economics and by beginning an inquiry into possible solutions. The first of these two duties is mine. I propose, therefore, to summarize briefly around five centers of focus some of our difficulties, particularly several that are stressed in this report and others which I have become cognizant of from the writings of economists on general education appearing over the past 175 years.

A first center of focus concerns difficulties which are essentially curricular. As teachers of economics we face the problem of determining which of the newer developments in economics and which of the social science and philosophic materials being urged upon us in behalf of general education are to be included in our basic course—a course, incidentally, which in spite of these added claims for inclusion has for at least twenty-five years typically remained of the same duration. Only by some criteria of selection from these bounteous materials can we hope in any intelligent way to resolve these difficulties.

Yet in the pursuit of such criteria we teachers of economics are again in difficulty. Most of us, the report reveals, feel that the major contribution which elementary economics should offer the citizen for democratic social action is a set of principles or an integrated body of theory. Yet this view is being subjected to serious criticism by several alternative positions as to the proper integrating principle for general economic education. One of these alternatives vigorously supported in parts of this report, especially by J. M. Clark, is the view that economics should be taught as an integral part of political, social, psychological, and especially ethical considerations. Another alternative is to center emphasis upon a nontheoretical description of modern problems and institutions. Still another emphasis is to stress history as the most useful medium of economic education. Finally there are those of us who are so impressed with the lessons to be drawn from our specialty, who are so convinced that dynamic teaching requires a teacher who radiates his own political and economic views, that our teaching objective is essentially hortatory. Of course, in practice most teachers combine with varying emphases theory, social philosophy, modern problems and institutions, history, and exhortation. The source of our curricular difficulties may be, therefore, that most of us have not formulated our curricular aims in terms of their philosophic basis and their practical implementation.

In view of the growth of economics, the new claims of other subjects upon our time, and the diversity or uncertainty of aims among us, how are we to develop criteria by which we can build an economics curriculum most appropriate to a free society? Is our problem one of too many objectives, as the Subcommittee on Elementary Courses suggests, or is it still, as A. B. Wolfe suggested thirty years ago, one of "lack of functional aims, definite enough to be real"?

A second set of difficulties in teaching economics concerns methods of instruction; e.g., such matters as the proper nature and role of lectures, quiz sections, discussions, texts, problems, visual aids, etc. The uniqueness of these difficulties is that economists generally are not aware they exist. The subcommittee questionnaires reveal that we teachers of economics are satisfied with our current educational practices, including both curriculum and method—a satisfaction, incidentally, which L. C. Marshall also found to exist twenty-five years ago. One wonders, therefore, whether this satisfaction results from an absence of difficulties or from situations which tend to make economists unaware of their problems. I suspect the latter.

There are several influences which sometimes breed in us an unfounded satisfaction with our methods. First, many of us as students have developed the "professional contempt"—so common among "non-pedagogues"—for the products of education departments and the concern over educational methods for which they stand. Not method but content we believe to be the instrument of true education. Secondly, to admit that our difficulties arise from our methods of instruction is to admit our own personal weakness. How much more satisfying to our pride is the explanation of our failures in terms of the uneducability of our students, of the inherent nature of our subject, or of conditions imposed upon us from outside our classroom!

I would suggest that we should reflect most seriously upon the statement which Mr. Lewis submitted for the reaction of economists in the government service: "Indeed it may be that the method of teaching is more important than the substantive content of the courses involved." For example, it may be that the great difficulty we find in getting students to transfer their classroom experiences to their civic life is due to the failure of our classrooms to give experiences in the co-operative discussion of economic issues such as ideally characterizes democratic social action. It may be that our failure to make theory the engine of analysis for which it is intended is that we teachers are too prone to follow the view of the majority of the Subcommittee on the Undergraduate Economics Curriculum in viewing the teaching process as mainly one "of transmitting to the student something which the teacher knows" rather than that of the minority which views education as "primarily concerned with teaching the student how to acquire knowledge for himself."

My current role is not to take sides on these issues. I think they do suggest, however, that the general failure of teachers of economics to reflect upon such problems of classroom methods in relation to a conscious educational and social philosophy may reveal to us an important area in which study and experiment might produce significant results for economic education.

As a third area of difficulties I shall consider several which result from the inherent nature of economics as a subject matter. Economists generally agree, we have noted, that theory should be stressed in an introductory course. While I have found in the literature many effective cases for economic theory, such studies as have been made on its teachability seem to suggest that abstract theory is simply not communicable to the great mass of undergraduates, or to the extent that it is teachable it becomes a tool by which examination questions are answered and not the engine of analysis for which Alfred Marshall intended it. The difficulties of theory seem to come from many sources, including the popular resistance to abstraction and to quantitative methods, the difficulty of the conception of mutual causation and of thinking in terms of the margin, the complications resulting from economists' use of popular terms but with special meanings, and from the citizen's tendency, once having mastered theory, to oversimplify its applications or to use it only for rationalizations. I cannot yet believe that these findings as to the inherent unteachability of theory are conclusive. They do suggest that those of us who feel the importance of theory need to direct our concerted effort to the discovery of conditions for its effective use.

The report will point to difficulties which result from the lack of finality of our subject matter and also to difficulties resulting from the fact that economics is becoming increasingly complicated. But probably the hardest problem related to the inherent nature of economics is that it is a subject on which most students will have opinions given to them by better teachers than ourselves. How is one in 108 hours of elementary economics to make any headway against the incessant and effective economic education to which students are subjected from their homes, from the press, from pressure groups, from unions and trade associations, from their church, and even from our noneconomist colleagues? The truth embodied in the principle of alternative or opportunity cost is simply one which proponents of change refuse to think about. For these reasons, is it not presumptuous to think that teachers of economics can really teach such a difficult and popularly disagreeable subject matter?

These considerations are related to and suggest a fourth area of difficulties; namely, those arising from the nature of modern society. Effective social action seems increasingly to be by well-organized groups —groups unified by special interest and using modern means of mass communication to secure support for their causes. The democratic ideal of effective free discussion by small intimate groups whose only aim is truth seems increasingly far from reality. With modern politics becoming more and more the pursuit of power rather than the co-operative pursuit of consensus, does it not seem that the teacher of economics who would equip his students for independent judgment may be preparing them for an ideal democracy which is not now our own?

In addition, certain modern situations tend to lessen the receptiveness of students to economics, even though mass communication and organized thinking may not close their senses to instruction. The modern reaction against economic determinism often results not in students taking the noneconomic more seriously but in discounting unduly or becoming indifferent to what economics has to offer. Furthermore, right now the issues of war and peace and the resulting future uncertainty of individual life tend to diminish greatly the apparent importance of economics for the solution of immediate and pressing social and personal issues.

The report points effectively to the enhanced problem for economic education which results from the shift of our economy from one of market toward one of government control. The requirements for intelligent citizenship in a democracy which is relying increasingly upon government controls would seem therefore to be growing. But, as Adam Smith observed, division of labor may increase production at the expense of civic virtues. Thus we may be living in an age in which we are imposing requirements of greater civic duty and intelligence upon our people who as a result of the modern economy are growing increasingly unable to meet these requirements.

To cite but one illustration of the difficulty in teaching modern economics which Smith's insight suggests, I refer to the problem of providing the citizen with an education by which he may distinguish the expert from the charlatan or dilettante. Admittedly the services of specialists are required to cope with the complexities of our economic and political society. In serving this need economics has even had to organize its own division of labor. Our question as general educators, then, is how much and what economics will enable the layman to be sure he is following the advice of the competent expert or of the politician advised by him? This very difficult field of the proper role and relations between the economist, the popularizer or teacher of economics, and the citizen needs much more thought than it has had in the past. Indeed its study might reveal important insights which would contribute to solutions to problems of curriculum and methods of instruction.

A fifth and final set of difficulties which beset the teacher of economics consists in detriments to effective teaching which we, the economics profession, impose upon ourselves. Already I have noted our frequent indifference to matters of pedagogy and our self-satisfaction with our current methods and curricula. But more important and perhaps basic to these is the fact that our standards of success tend to lessen the esteem of teaching, for the rewards of honor among our fellow economists persistently flow to those creative minds who advance the science. The rewards of prestige from our fellow men regularly flow to economists who use their authority to tell their fellows what they prefer to hear. The rewards of money go to those who sell their "scientific bag of tricks" to interest groups who are willing and are able to pay. He who would devote himself primarily to becoming a good teacher must either be one who would fail in the more acceptable or more lucrative roles or one who has been led astray.

This is not to detract from the importance of economic research nor from the possibility that research may be good preparation for effective teaching. It is simply to suggest that under existing conditions motivation and education may be lacking for the greatest development of excellent undergraduate teaching. From this fact may flow many of our difficulties. The drive to do creative research will probably always promote competent economists to seek to withdraw from time-consuming undergraduate instruction, until at least economists again become social philosophers; thereby making research complementary with general education.

Not only is the motivation for undergraduate teaching increasingly lacking but so is the educational background. Graduate institutions seek generally to train researchers, not to educate teachers. Robert B. Pettengill, of the Teaching Institute of Economics at the University of Southern California, recently found that of sixty-eight leading colleges and universities only four had required courses in educational methods for prospective teachers of economics, four more had elective courses in teaching methods, and only ten devoted as much as two to nine hours of seminar time to the matter. This is not necessarily to suggest that good teachers are made by methods courses. It does suggest that one important source of difficulties in economic education may come from the fact that graduate departments will not realize that one of their primary human products is teachers. This will be increasingly so in the future unless economics departments choose to be indifferent to the needs of the expanding junior college, general education, and adult education fields.

The key importance of our last set of difficulties becomes apparent when viewed in relation to the previous four. Important as may be our problems related to curriculum, to methods of instruction, to the nature of economics, and to the nature of modern society, a precondition for a general discussion of these among economists is for us to overcome difficulties inherent in ourselves. This is why it is so important that we here, who I presume are among the convinced, develop plans for institutional arrangements which will promote study, discussion, and experiment concerning economic education.

How can the American Economic Association facilitate the continued study of our subject? How can we bring into our discussions the many teachers of economics in junior colleges, teachers colleges, liberal arts colleges, adult education, and in secondary schools, many of whom are not members of our Association? How can we motivate a quality of journal article worthy of our professional magazines, and how can we interest once again editors of these journals in materials on economic education? How can we stimulate research by graduate students and mature economists on our relatively undeveloped field for study? How can we promote discussion which gets beyond the level of superficial testimonials or exhortation or of reiteration? How can we promote a genuine discussion which involves a truly co-operative pursuit of insight and truth oriented from a conscious philosophic basis? How, indeed, can we get this current report widely read and discussed? These, I propose, are among our immediate difficulties. Now that this report is published, where do we go from here?

In closing, let me warn against a possible misinterpretation of my remarks. Though I have stressed difficulties I believe solutions are possible. Indeed, I have become aware of most of these difficulties by reading how economists have proposed to remedy them. I am convinced, therefore, if we teachers of economics but reflect upon the nature of democratic social action, if we but seek to develop thereon a philosophy of democratic education, if we but frame our economics curriculum and our teaching methods in terms of this philosophy, if some of us but devote our major efforts to the pursuit of the art of teaching as an integral part of a personal and social philosophy—if we but seek to do these things our difficulties need not be insurmountable.

Difficulties in Teaching Economics—Possible Solutions: ALBERT LAUTERBACH: When the beginning student—or many an ordinary citizen for that matter—hears the word economics, one of two things is apt to happen: either he falls asleep or he runs away. The marginal rate of substitution of other courses for economics appears to be near the danger point today; few are the college departments of economics that could afford to have their subject taken off the list of "required" courses.

This is an amazing situation in a world in which economic decisions affect the daily life of every person in a crucial way. It is imperative for economists to search their souls, to try to find out just what teaching practices may have contributed to the public reputation of their discipline, and, above all, what can be done about it, not from the viewpoint of vested departmental interests, but from that of the positive part that economics can play in general education.

To my mind, the Committee report on undergraduate teaching of economics represents an outstanding contribution; it approaches the issue in a forward-looking and promising spirit. Perhaps the Committee, at some future date, could also test the effectiveness of economic teaching, for example, by analyzing a specific course from the viewpoints of the knowledge contained and communicated and the impact on the attitudes of the student: does it make him enthusiastic, scornful, conservative, reform-minded, or what?

The Concept of General Education. If any one result of the investigation stands out, it is the emphasis placed by representatives of highly specialized fields—business firms, government agencies, medicine, law, engineering, social work—on the capacity for independent thinking and a broad social outlook as the most desirable equipment in a specialist today. Thus general education is increasingly interpreted in terms of personality development. Now I am not one of those who turn their noses up at vocational studies; their basic importance cannot be denied in a world of growing complexity in its technological and managerial organization. But vocational schools increasingly discover that successful specialization can be expected only on the basis of a sound training in independent thinking and judgment. Conversely, many colleges find that they get nowhere, educationally and otherwise, if they try to superimpose assorted vocational courses, perhaps of a diluted kind, upon a liberal arts structure.

However, it is the concept of education itself that really matters. Most of us, I hope, have discarded by now that old-fashioned notion of education as the accumulation of a stock pile of information that will last you for your entire postgraduate life once you have acquired it during your school years and had it duly certified through a B.A. Few of us think of the role of a teacher today as a kind of fireman who opens the student's skull, then takes a big shovel to push as much intellectual fuel into it as it takes, and finally seals the skull hermetically in order to keep the wisdom thus supplied in it for good. Of course, if we can imagine something even worse than that, it is the teacher who just leaves the skull open.

Real education does not consist of cramming facts, figures, or charts down the student's throat three times a week—they will be out of his organism the day after the final examination. It does not consist of making him learn theorems by heart. It does not consist of merely showing him that most issues are complex and then leaving him stranded in a confused and defeatist mood. Real education, applied to the field of economics, consists of arousing the student's interest in and understanding of important processes in economic society while giving him a general knowledge of the sources and tools of research.

Good teaching, accordingly, does not mean mere entertainment of the students (or a demagogic talking down to them) on the principle that the customer is always right. If the students, among other benefits, also get fun out of the course, so much the better—professorial dullness is getting more unbearable every year—but the essence and test of good teaching are in the intellectual excitement that makes the student both eager and able to learn, not only for the duration of the course, but forever. This, indeed, is possible only if the teacher offers a firm yet thoroughly democratic guidance; if he does not dodge value judgments or personal opinions and yet does not expect the others to share them; if he knows how to distinguish between opinion and bias, between objectivity and neutrality; and above all, if he has no less respect for the personality, needs, and possibilities of the youngest freshman than for those of the oldest expert.

Main Types of Undergraduate Economics. At the present time, an almost endless variety of approaches to the teaching of general economics appears to exist—some of us might prefer the term chaos—despite the standardizing effect of textbooks. At least three major types of economic instruction can be discerned in the undergraduate college structure.

The first type is the one which places the main emphasis on economic theory in the sense of a supply-demand analysis. The educational aim of this type of instruction appears to be a general training of the student's mind in abstract reasoning, with subsequent application of analytical tools to specific problems. Now if some theoretical thinking can be learned without reference to materials that interest the individual concerned, this aim may be well worth while for certain types of students; but the academic world appears to be getting rather doubtful whether either the subject matter or the methods of neoclassical theory offer the best way to achieve any such result and whether this approach is not conducive to social escapism. Too often has it neglected Alfred Marshall's classic interpretation of economics as "a study of the economic aspects and conditions of man's political, social and private life; but more especially of his social life" (*Principles of Economics,* 8th ed., London, 1947, page 42).

The second major type of economic instruction aims at business training. It concentrates on a description of existing institutions from a practical viewpoint, but often feels under an obligation to pay tribute to economic theory by presenting supply-demand relationships in analytical terms—to the disgust of many students. Needless to say, business administration, marketing, and accounting are important and legitimate fields of studies; but the proper place to emphasize them is in a vocational institution rather than in a general education college.

The third major type of instruction attempts to convey to the student a broad understanding of socioeconomic processes, including institutional change and cultural variation, with such analytical generalizations as are helpful in achieving the educational aim mentioned earlier. To my mind, this type of instruction meets most frequently the needs of the undergraduate student to whom economics is new as an academic subject. A detailed outline of one such course, along with a discussion of other approaches, can be found in a report submitted to the Metropolitan Economic Association of New York earlier this year by its committee on approaches to the teaching of basic economics.

Educational Aims of Economic Instruction. Very great differences exist among the educational and administrative structures of American colleges. All attempts to tailor economics courses to this or that textbook, regardless both of the prevailing needs of students at a given institution and of individual differences among the students, have failed, as they had to. So has every attempt to cover the ground, namely, the whole expanding field of economics, in a beginner's course.

What we need is a variety of general courses in economics instead of the traditional required course for everybody. Such differentiation should by no means be limited to that between courses of varying length, though length is one of the many things to be considered. We need, further, a concentration of most types of introductory courses on live issues in economic society—which does not necessarily mean topical issues—along with an introduction of the student to analytical thinking about real socioeconomic problems in a broad sense, and not about made-up pseudomarket situations which mean very little to him. It may be advisable for some groups of students—either social or occupational—to begin with specialized economics courses in fields that are of personal interest to them—say, consumer problems or agriculture or labor or foreign trade or the economics of education—and then to proceed to integrating courses involving principles and analysis. This, indeed, presupposes a broad training and outlook on the part of the teachers in charge of specialized courses as well.

Another possible setup for an introductory course is to start out from a specific problem in economics that everybody is interested in; e.g., the local housing situation. From there one can branch out, during the whole school year, into standards of living, past and present, at home and abroad; social stratification; motivations of business activity; the market mechanism; national income and financial policy; political and racial factors in housing, and the sociophilosophical issues involved; and so forth. Such a procedure will center around a down-to-earth problem in economics, but it will bring in gradually every other aspect of the issue that matters—regardless of whether it is classified as financial, political, psychological, or philosophical.

No real educational purpose is likely to be met if a course attempts to offer an economic encyclopaedia in a nutshell; if it supplies a hodgepodge of business data or techniques without any structure or analytical equipment; if it operates with psychological assumptions that have no relation to social reality; or if it gives the student the unwarranted impression that the essence of theory and abstract reasoning consists of making simple things complicated rather than vice versa.

The course should make the student realize that economic processes are of vital concern to him and that he can come to understand them more fully through earnest study and research. It should make him wish to go on studying economic problems, both at the college and on his own; it should make him apply, in a systematic way, his intellect, his new knowledge, and the reasoning power acquired to specific problems in economics in which he has a personal stake. His study of economics should serve to give him a better understanding of society; it should help make him a democratic citizen with social responsibility and a healthy power of resistance against emotional bias, against quacks and rabble rousers. Such democratic freedom of intellectual choice should not, indeed, be confounded with a preservation of the economic *status quo*. In the long run, nothing could be more damaging to the intellectual attraction of economics than a quasi-totalitarian commitment to the economic institutions or ideologies of the moment.

It is perhaps sheer heresy to say to a group of professional economists that even the best economics course is by no means the only way to achieve the civic purposes described—and for many students not a feasible way at all. Quite generally, we should not assume that neglected educational needs are always met best by offering an extra course with this or that title or text. What is needed more often and more urgently is an economic teaching staff with broad interest and training in both social science and education—or a different educational approach and atmosphere at the college concerned in general. Moreover, social responsibility—including a great deal of economic understanding—can be conveyed to many students by courses which are completely outside the jurisdiction of the department of economics.

I happen to teach at a college which has done away completely with required courses, including economics. This does not mean that any student can take at random any courses he or she likes for four years and then get a degree. It does mean that the curriculum is made up for each student individually, with great care; that it follows the interests and needs of each individual as closely as possible; and that no vested interests of any department in required courses are recognized. Much economic interest and knowledge can be conveyed by a history course, for example, and vice versa; certain literature materials have aroused in some students a burning desire to understand economic society, and have led them to do work in economics which they were not "required" to do at all. In an appropriate educational setup with sufficient checks this need not lead to any dilettante medley of subjects, and it may result in an exciting cross-fertilization of thoughts.

There is a danger in the departmentalized structure of many colleges of a pressure-group approach which, if anything, is even less attractive in the economic community than in other groups. There is no use in our following a myriad of assorted special-interest groups in rationalizing their professional activities into an exceptional degree of social utility. It is not our job today to "sell" economics to the colleges and the students—except by a constantly improving performance. What we all should primarily be interested in—whether we happen to be classified as economists, psychologists, linguists, or archaeologists—is the development in our students of an independent, active mind, of social understanding and responsibility, and of the desire and ability to learn on their own long after the last examination is over.

The Condition of Economics and the Principles Course. Some of the difficulties mentioned earlier really reflect the general condition of the economic discipline—a condition which, in turn, mirrors a crisis in economic society itself. The problem before us, therefore, really far exceeds that of teaching an academic subject. The often implied expectation of a necessary world trend toward free competition has worn thinner and thinner; the traditional identification of rational choices with price decisions on a free market has lost ground; what is more, the actual range of nonrational behavior has been more widely explored; and collective action or social policy is ordinarily no longer considered a mere copy—and an undesirable one at that—of individual action. To the extent that the conventional course still takes a competitive framework or a general trend toward price equilibrium for granted, a very large number of individual and group actions even in North America—and much more outside it—appear to be unrelated to the rules of economics; or else this subject, as taught traditionally, cannot claim to offer very many applications over time and space.

How could we make the general economics course more meaningful to the student—more helpful in understanding economic society? Above all, economics teachers should not worry unduly about the borderlines of their subject toward other branches of the social sciences. Their legitimate province includes not merely happenings on an abstract market but the influence of possible dissatisfaction of individuals or groups with the results of the market; conservatism or cultural lags in consumers' habits; the economic impact of social codes, power, prestige, and propaganda; the market effects of public intervention and lobbying; and so forth. Actually, traditional economics has employed many such criteria in a concealed or unconscious way.

Conclusions. Fundamentally, most college courses in general economics, especially on the beginner's level, should be social science courses with emphasis on and detailed treatment of material factors in society. They should offer a balanced picture and analysis of contemporary economic society against its historical background. Economists should beware of educational isolationism; they should be prepared constantly to correlate every aspect of their subject with government, history, sociology, anthropology, psychology, and social philosophy. Such an approach should by no means be confounded with the hodgepodge of the conventional survey course. Needless to say, this setup leaves every opportunity for intensive study of special areas of knowledge later on.

Generally speaking, however, introductory courses should stress the social framework of economic life and should consciously apply economic analysis to concrete social situations. They should not try to evade the issues arising from the showdown of socioeconomic systems and ideas. They should, on the contrary, help the student in achieving clarity on the historical changes in the concepts of conservatism and liberalism, for instance; on the relationship between individual liberties and economic trends; on the socioeconomic roots of fascism and communism, respectively; and so forth.

To the extent that we are faced with general difficulties in college teaching today, economists should press for a general educational reform in the direction of smaller classes, more individualized teaching, decreasing rigidity in curricular requirements (and, especially, less of a rigid commitment to a major and a minor); general orientation of teaching, not according to the subject matter or the teacher's past training, but according to the students' interests and needs. Economists can also contribute an expert re-examination of the whole financial basis of our college education.

College administrators should realize that no one standardized course in economics (or in any other field) will meet the needs of all the students and that no course is indispensable enough to be forced down the throat of every student. Instead, colleges should offer a variety of introductory (and other) courses; they should determine through individual counseling which type of course is best suited to the personality and needs of the student concerned. Some beginner's courses may be of the exploratory type; that is, follow very largely the interests of their students as a way of opening the discussion of economic factors in the social process. Many more courses should integrate field work, research projects, and visual aids with the main trend of the discussion.

While student needs are the first consideration, the types of courses offered should take the personality and interest of the teacher into greater consideration than the standardized arrangements of large institutions have usually been able to in the past. No one can teach well something he is not really interested in. At the same time, the training of graduate economics students who want to go into teaching should include philosophy, methods, and techniques of modern education. Generally, the personnel policy should consider teaching ability and interest in students no less important than the number of publications and the general erudition of a teacher (though I do not mean at all to minimize the importance of a scholarly mind and equipment).

Depending on the types of students and institutions, a clear curricular distinction should be made between courses that emphasize business training, those which stress analytical procedures, and those which offer a broad picture of economic society. Colleges that aim at general rather than vocational education will presumably concentrate on the third type of course, but this does not mean that one standardized course—no matter how broad—should be forced upon every student and teacher in the department.

In summary, I cannot offer any one panacea or any one course layout that would solve the problem of economics teaching for every college, department, teacher, and student. We need individual treatment of each of them, with a corresponding diversity in the curricular setup. Economics teachers and department administrators should be educators first. They should keep in mind that economics is but one approach—certainly an important one—to general education. Their loyalty toward the students will be rewarded by real interest on the part of the young generation toward economic affairs, social science, and higher education in general.

This Is What I Should Do Now, If—: HORACE TAYLOR: If I could construct, according to my own tastes, a program for teaching economics in a college primarily interested in general education, I should proceed about as follows.

First, I should lay down the principle that the aim of economics teaching in college is to further the development of mind and character in individuals who can become competent, responsible, and informed members of the community. Inclusive as this objective is, it does not include specialized professional or vocational training. To the extent that the proposed study of economics contributed to the production of educated people, it would, of course, affect the level at which professional or vocational training could begin.

The objective I have stated would not permit a high degree of concentration by students in economics. It would require, instead, that each student devote much of his attention to the other social sciences—to mathematics, to the natural sciences, and to the humanities. It would require also that students majoring in economics gain a broad knowledge of the subject instead of becoming narrowly specialized in one of its several divisions or subdivisions. So far as professional training of economists is concerned, that seems as much the business of graduate schools as it is that of law schools to train lawyers or of medical schools to train physicians.

A next step, which obviously is a crucial one, would be that of securing and maintaining an adequate staff. The qualifications I should seek in each staff member would be professional competence, an interesting mind, and a devotion to collegiate teaching. Whether a prospective teacher is a specialist in labor economics or in the economics of some region of the earth or in any other of the horizontal or vertical divisions of our subject is, in my judgment, much less important than the qualifications I have named. From this point of view, the principal embarrassment that might arise with regard to specialized abilities and interests would come from having too many teachers with the same or similar interests rather than from not having some branch of our subject represented by a specialist.

Obviously, this might mean either that courses in some of the fairly standardized divisions of economics would not be given or that they would be given by nonspecialists. Faced with this dilemma, my preference would be for them not to be given. Why is it desirable in colleges with limited staff resources to offer courses in all or in as many as possible of the so-called "special" fields—perhaps even special patches—of economics? For my part, I should much prefer a limited number of fairly broad courses, most of them extending over a full academic year, each taught by a competent specialist with the other qualifications I have named, to any forced offering of a complete line of academic merchandise. With its resources chosen and allocated in the way I have described, most departments—even those in small colleges—can provide as great a variety of useful and interesting educational experience as their students will be able to assimilate.

After setting up the educational objective and the criteria for staff and courses, I should next lay out the program of study over the four years of college. The criteria here would be progression and depth. I should hope to be able to secure general faculty approval of and cooperation in an integrated social science course to be required of all freshmen. Such a course would, ideally, explain our modern American and Western European ways of thinking and acting along economic, political, and broadly social lines. This would be done by tracing the changes in such thinking and acting from some time in the past—say the late Middle Ages—down to the present. My idea would be that such a course should be conducted through sections of not more than thirty students, meeting with the same instructor for four or five hours a week throughout the freshman year. My idea also would be that this course should be conducted by a staff composed of members of the departments of economics, government, history, and philosophy. A matter of policy would be that every member of the department of economics would at some time have been actively engaged in teaching this course, and that some members of the department would at all times be engaged in teaching it.

As elsewhere in this discussion, there is no opportunity here to spell out the proposal I have made. I suggest, however, that our new report presents a fairly elaborate study of the subject. I also suggest that a good many effective programs of this kind, well deserving of emulation or adaptation, already exist. Good examples, in interesting variety, are the social science sequence at the University of Chicago and the courses for freshmen at Amherst, Colorado, Harvard, and Columbia. If it should turn out that social science colleagues outside the economics group were so departmentally minded as to be unwilling or unable to plan a freshman program except through the stereotypes of their respective disciplines, I should not want to create and offer such a course. Neither should I want to if an interdepartmental group of teachers qualified for work on this broad scale were not available. If either of these "ifs" worked out adversely, I should prefer to settle for a required freshman course in general history of the West or in social philosophy.

This, however, is a secret, since I should not like my history and philosophy colleagues to know in advance that I would settle on these terms.

A more formal study of economics would, in my plan, start in the sophomore year. That already is common practice, but the course I should design for beginners differs considerably from most of those now being given. I should not offer to sophomores a systematic and comprehensive body of theory. The course I propose would deal, through the method of analytical description, with going economic affairs. By the method of analytical description I mean the same as Wesley Mitchell meant by it. If this be synonymous with institutionalism, that is perfectly agreeable to me. This course would study relationships and generalize about them; it would, therefore, be concerned with theory. (Parenthetically, I should like to anticipate some arguments by saying that, in my view, economics *is* theory.) But, in this course, the generalized relationships would be closely limited, and they would be reached, so far as possible, from the study of facts instead of from some series of assumptions such as must be posited for the erection of a systematic body of theory.

The most abstract feature of the course would be a quite limited treatment of the price system and the allocative process. Instead of being the prime consideration of the course, however, this sketch of prices and allocation would serve only as an organizing device. Around it would be studied money and credit, industrial organization, industrial relations, international economic relations, and a set of problems surrounding these several aspects of our economy. Questions of policy—public and private—would be raised in their appropriate contexts, and various criteria for testing policies would be considered. In its concern with criteria, the plan of study would, ideally, build in each student's mind a nest in which value judgments would be hatched.

The course I have described would necessarily be concerned with the relations of government to economic affairs. These relations obviously should be studied in terms of governmental functions rather than in terms of political theory. Our concern should be with what government does rather than with what government is. If such a course plan appealed to the colleagues of the government department—in the sense of offering a desirable feature to their own program of study—I should be glad to have their collaboration and participation in the preparation and conduct of the course. This would assure special competence as well as breadth and could improve the efforts—duplicating ones—now made by both departments with regard to such matters as legislation, taxation, international agreements, and administrative law.

Now to consider the junior year. By this time our direction has been defined, and the next steps are fairly obvious ones. They are so much so, indeed, that I shall sketch them with even greater brevity. I should make the central feature of the junior year a somewhat elevated course in economic theory. It would have the sophomore course as its prerequisite, as would all other courses offered to juniors. This theory course would take up successively the systematic relations involved in value and distribution and in the body of study that is reached through what has come to be called "the national income approach." The course could proceed at a high level of maturity for these reasons: the students would have studied, both genetically and in terms of analytical description, the matters about which they would be generalizing; they would be experienced in abstract thinking; they would understand the nature of the assumptions they were making. It would be required of all departmental majors and might be elected, also, by any student with a serious interest in economics. Alongside this course for juniors would be ranged a small number of other courses. Their nature would be determined by the capacities and interests of the staff. Given the staff resources, the three courses of this kind that I should offer would be in economic history, economic geography, and comparative economic systems.

The plan of work for seniors would proceed, at each point, from the junior course in theory as a prerequisite. The subjects to be studied would, again, be determined by the special abilities of the staff. I should plan that some of the work at this level provide for intensive study and research through groups of not more than twelve students organized in reading courses and one or more seminars. Special reading and research facilities would be provided for a limited number of students selected on the basis of their excellence and promise.

In all that I have said, I have deliberately avoided the subject of costs. The plan I have offered is, in my judgment, a minimal program. It would be fairly expensive, but no more so than is the case now in a large proportion of our colleges. If in order to provide sufficient sections of the basic courses (the integrated program for freshmen, the analytically descriptive study for sophomores, the theory course for juniors) it was necessary to limit severely the variety of specialized courses, I should accept this limitation in preference to the alternative sacrifice.

A discussion such as this cannot conclude; it can merely end. I have been presumptious, and I deserve the criticisms and arguments which I hope you are going to shower upon these remarks. And I shall end by using "if" one time more. *We* are the teachers of economics, with all our inabilities and limitations. But *if* we think along the lines explicit and implied in the new report of our Committee and discuss and argue them among ourselves, I believe we can become better teachers than we are.

Comments on the Teaching of Economics: BEN W. LEWIS: At an Association session on the antitrust laws three years ago I offered the prediction that because of the certain growth of large enterprises and organizations and the consequent weakening of the control processes of the free market, our economy is bound to be characterized increasingly by government controls and government enterprises and suggested that we would be wise to "get set." Two years ago, at a session on the economics of preparedness, I suggested that we had been in a state of emergency, with the employment and acceptance of emergency government controls, continuously since 1929 and that the end of controls was not in sight. Today it is fair to suggest that the end of far-reaching and intimate government controls is not only not in sight—it is simply not there to see.

This is the setting. As far ahead as any of us is entitled to guess, our mixed economy—and I do mean "mixed"—is going to sustain heavier and heavier doses of collective economic decision making and consciously collective economic activity. This is the economy—the *political* economy—about which we are talking and teaching. The problems it poses are the problems which all of us, as teachers of economics, are going to be concerned within our classrooms throughout the remainder of our turn on the stage. We make not like it; we may deplore it; but this is it.

To recognize this fact raises many more problems about the teaching of economics than it settles, but at least it helps us to identify the issues and the considerations. For one thing it means that increasingly—and even in our general introductory economics courses for nonmajors—we shall be turning out professionals. We are no longer teaching a general education course solely for the cultural enlightenment of intelligent and happy citizens. Citizens in the United States will come more and more to face the task of making conscious day-to-day decisions affecting and determining the day-to-day functioning of the over-all economy. The traditional goal of economics as a social science is to help our graduates to lead fuller lives. It is nice for them to know how the economy runs itself, just as it is nice to know about flowers and books and mountains and things in general. But, as our political economy comes more and more not to run itself but to be run, consciously, each one of us as a member of this kind of economy has a professional, vocational interest and responsibility to make informed, conscious decisions about all kinds of things that we used to think were taken care of by "the system." Citizenship is no longer an avocation—it is a business. Our economics students are really majoring in economic administration. We are teaching, if you please, professional courses. Willy-nilly, we are teaching people who will be general economic practitioners and who will need the best training we can give them for the performance of this role.

The range, variety, and complexity of the public economic decisions which men must make now and in the years ahead is staggering, and our own task as teachers is correspondingly great and difficult. May I suggest that the simpler our approach and the less emphasis we give to peripheral details, the greater our contribution is likely to be? Our most important immediate job is to teach our students what an economy really is, what we mean by an "economic system" (any system), what it is supposed to do; and not as a rarefied intellectual exercise, but in simple terms of productivity, allocation, and distribution as problems of human relationships in a world of scarce resources. I suggest that we lead out from this and return to it constantly. Practicing citizens will need to understand the nature of economic considerations and of economic choices; and they will need to appreciate the possibilities and the limitations of economic analysis and economic tools. They need classroom experience in centering issues and in separating the important from the less important and, particularly, from the irrelevant. They should be taught to recognize value judgments, and not to avoid them, but to use them for what they are worth. They must come to realize that in an operating economic system, decisions have to be made, minute by minute, on the basis of much less than complete information and full consideration; and that compromises and half measures may in fact reflect real progress. They must know (and so must we) that economics does not offer a bag of right answers—that what we are seeking for society is the best set of continuing, flexible working arrangements. What we are seeking as the product of our teaching efforts are graduates with economic literacy, with a sense of experience and the ability to move around with a feeling of familiarity—a sense of having been here before. And, let me repeat, the experience should be related constantly to the task of the economy—and it must be simple; not easy, but simple.

I have little to suggest on method, beyond the injunction to be aware of its significance and to be active and imaginative in developing its possibilities. Method certainly is of great importance, but it must vary with the teacher, the students, and the situation and always, obviously, within the limits of what is economically feasible. My only comment on teaching practice is this: the student will learn more about how (and how not) to deal with economic problems from the example set by his teacher in dealing with economic problems than by all other factors and forces and devices and programs and techniques and tricks put together. If the teacher demonstrates a respect for facts and realities and for workmanlike analysis, if his approach is simple and direct, his discussion calm and reasonably objective, his criticism relentless but sympathetic, and his judgment balanced and his conclusions offered with humility, he will turn out more than his share of able practitioners in political economy.

A final word—on attitude. You may have detected a sweetly naïve note in all of this. The really great task for our country in the years and decades ahead is to demonstrate that in a world of increasing collective controls essential human liberties can be preserved—that government need not mean slavery. There is one "certainty" in the picture and one "must." We are certain to have more collective action, and it must be kept democratic. The coming world of collective action constitutes the real, and really the first, great challenge to our easy professions of democracy and human rights. It is our job as teachers to stop embracing despair and railing at bureaucracy and interferences as such, and to cease running our little private parades of labels and horrors, and get down to our business of seeing to it that the controls which come are democratic and consistent with individual self-respect—and that they work. This is the great challenge to us as teachers. If we fail to meet it, the certainty of controls will remain a certainty, but the "must" of democracy will become a "maybe." But before we teach we must believe. Personally I am naïve enough to believe.

FARM PROBLEMS: II. AGRICULTURAL PRICE SUPPORT

COMPARATIVE COSTS OF AGRICULTURAL PRICE SUPPORT IN 1949

By GEORGE MEHREN
University of California

I. *The Questions*

Questions Engaged. The major question at issue here is the differences in money costs of price support—or in additions to cash receipts—at the farm level in 1949 among three price support programs: (1) Title II of the Agricultural Act of 1948; (2) the Agricultural Act of 1949; and (3) the Brannan Plan as defined by the statements of the Secretary of Agriculture on April 7 and April 25, 1949. None of these proposals was effective in 1949. Several other questions are developed involving more assumptions with less empirical foundation and, therefore, yielding results of considerably less reliability.

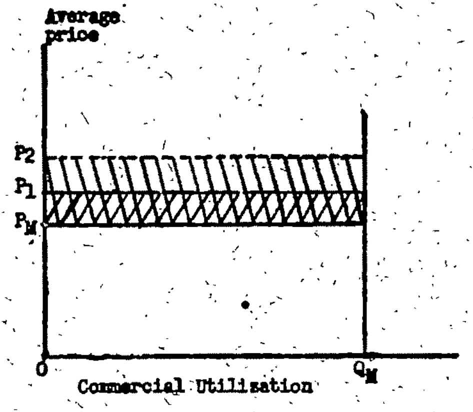
Differences in first costs by commodities and in the aggregate may be approximated quite simply. In Figure 1, Q_m—henceforth called market utilization—is the quantity of any supported commodity which would have moved into commercial sale over the support period had no program for direct support been in effect. P_m—henceforth called market price—is the season average on-farm price at which Q_m would have been cleared. P_1 and P_2 are levels of price support at the farm level for the product under any two plans.[1] Q_m approximates as closely as possible actual 1949 commercial utilization without support. For many commodities with little on-farm use or carry-over, the range for error of estimate is limited. For others like the feed grains it is large. However, a basis for cost comparisons can be formulated in this way even if actual 1949 conditions are not precisely replicated.

As defined here, total first costs for the commodity under Plan I would be $Q_m (P_1 - P_m)$ in Figure 1. Under Plan 2, total first costs at

---

[1] For some commodities, commercial utilization is effectively total supply. For others, commercial utilization bears a fairly stable relationship to total supply. While it is assumed that the quantity offered for commercial sale would be the same at all three price levels, such offerings would probably differ somewhat. This assumption will probably lead to understatement of cost differences among the plans. It is also probable that cost differences will be greater at stages of processing or handling nearer final consumption, since most handling and processing charges increase as farm price levels rise. Further, the announced support price may not be realized as a result of storage, quality, or other requirements.

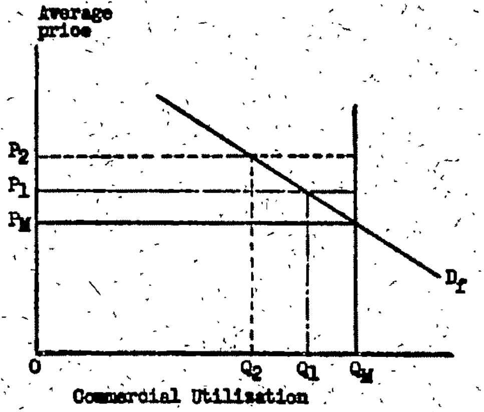
FIGURE 1



the farm level would be $Q_m(P_2-P_m)$. However, the differences in total first costs between the two plans reduces to $Q_m(P_2-P_1)$ and P_m—estimated price without support—drops out. Since support prices are known, differences in total first costs between the two plans could therefore be estimated through approximating only one unknown magnitude—Q_m—or commercial sales in the absence of support operations. These differences by commodities may be aggregated to obtain differences in total first costs among the plans.

These calculations would not measure the magnitude of first costs nor the distribution of such cost between users and government if support were achieved through diversion of stocks from commercial channels. Therefore, calculations are made yielding differences in first costs identical with those resulting from the method implied in Figure 1 but

FIGURE 2



also yielding estimates of the magnitude of first cost and of its incidence if diversion were used.

In Figure 2, Q_m, P_2, P_1, and P_m are as in Figure 1. The net quantity-price regression for 1949 is indicated by D_f. If price were supported at P_1 through direct payments, the quantity moving into trade would be Q_m, its average price would be P_m and total first cost to government would be $Q_m\ (P_1 - P_m)$ in which both P_m and Q_m are unknown. If price were supported at P_1 through diversion, only the quantity Q_1 would move in commercial channels and $Q_m - Q_1$ would be acquired by government at a total outlay of $P_1\ (Q_m - Q_1)$. Added cash outlay by users at the farm level would be represented by $P_1Q_1 - P_mQ_m$. Total first costs thus would be $P_1Q_1 - P_mQ_m + [P_1(Q_m - Q_1)]$, which reduces to $Q_m\ (P_1 - P_m)$ or total first costs with direct payments. To calculate first costs and their distribution under diversion would, therefore, require approximation of market utilization and price without support and of the demand regressions. Therefore, values under 1949 conditions are estimated for P_m and Q_m and for demand elasticity for each supported commodity. A linear demand is then extrapolated over the range between the market price and the highest of the support prices. The quantities which would move into trade at the various support prices are calculated from this regression.

Questions Not Directly at Issue. Cost of support at the farm level is neither the single nor even the most important question which may be asked about these programs. No direct reference is made here to questions associated with methods of support, with the support concept itself, with the many related programs and statutes, or with the determinants of 1949 demand and production patterns which define the economic context in which the three plans are considered. The functions necessary to answer most such questions are yet largely unknown. In the short run, evaluation of net costs would require at least the comparison of value of stock against the effects of the associated decrease in utilization in regular channels. In the long run, such evaluation would require reference to many more questions. For these reasons, costs are designated here as "first costs." In no sense should these first costs be considered net or final.

Relevance of First Cost Comparison. The policy of the federal government to support farm income is unequivocally stated in many laws. It is a permanent commitment, no longer tied to war or to depression. Intervention by government into decisions of nominally private enterprises has grown over two decades. Risk of price change is transferred to government, or government authorizes and fosters the use of monopoloid devices. In exchange, private enterprises are constrained or induced to transfer decision making with respect to one or more enterprise-profit determinants to government. Price support is now a major instrument of farm policy, extended to all commodities insofar as funds permit and as producers or handlers conform to prescribed standards.

Thus, this study treats but one of the many aspects of this comprehensive set of programs—the relative costs in a single year of three proposals for direct support, operating in a context in which both production and demand would be partly determined by other farm programs. The political significance of cost comparisons and the limitations upon measurement have long been recognized. Costs may be defined in many categories and over varying periods. The practice of the Congress in financing price support operations through blanket appropriations and general authorizations is in part attributable to the difficulty of predicting costs even one year ahead. Relative costs could become the sole criterion for chosing among plans only if all were essentially indentical in terms of other norms. This is clearly not true with respect to the three plans considered here. Therefore, first costs can be no more than one of the several criteria by which rational choice among alternative programs should be made. While many important questions are not directly engaged in the cost calculations for 1949, the conclusions adduced therefrom are helpful in specifying working hypotheses for many of them even over the long run.

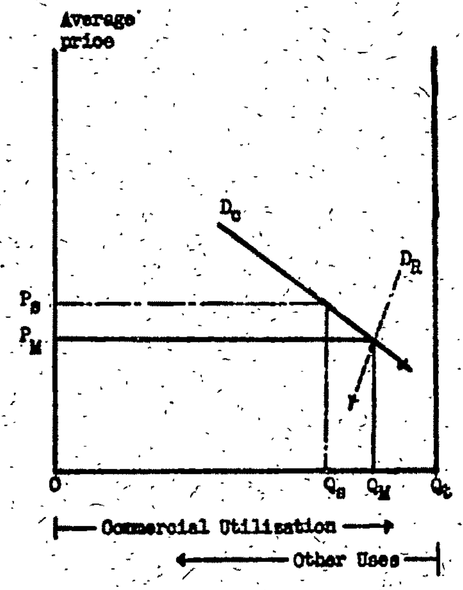
The cost of support as calculated here will differ among the three programs from differences in the determinants of price standards and support percentages rather than in method for support. However, differences in distribution of first costs from use of diversion and direct payments become clear. Further, in a given economic context the higher were the 1949 costs, the greater would be the consequent supply response and demand shifts. The more the basic maladjustments leading to support and control would be compounded and their solution impeded, the greater would be the scope and stringency of control made necessary. In short, many of the repercussions of support upon individual enterprise, administration, and the general economy are directly related to the magnitude and distribution of first costs. Calculation of costs in a recent year permits flagging of probable supply, utilization, demand, and price shifts and, therefore, permits some generalization of costs at least into the near future.

II. *Method of Analysis*

Calculation of the magnitude, distribution, and differences of first costs requires: selection of the commodities in terms of which cost is measured; estimation of the season average on-farm prices and commercial utilization which would have prevailed in 1949 had there been no direct price support; estimation of quantity-price regressions over the range between the highest support price and estimated price without support; calculation of the parity or support standard prices for 1949; and specification of percentages of parity or support standards.

The Commodities. The list of commodities includes those mandatory under either the 1948 or 1949 statute or included in Group I of the Brannan Plan and most of those to which support was extended in 1949 under Title I of the Agricultural Act of 1948. Only the products mandatory under the law or program defining a given parity or support standard and those supported in 1949 are included in the cost calculations identified by the given support standard plan. Support would have been mandatory in 1949 as follows: under Title II of the Agricultural Act of 1948—cotton, wheat, corn, tobacco, rice, peanuts, wool, and Irish potatoes; these same eight commodities and mohair, tung nuts, honey, milk, and butterfat and their products under the Agricultural Act of 1949; the Brannan Plan—Group I commodities—including corn, cotton, wheat, tobacco, whole milk, eggs, farm chickens, hogs, beef cattle, and lambs. Other commodities supported in 1949 and introduced into the calculations include: turkeys, sweet potatoes, soybeans, dry edible beans, cottonseed, flaxseed, grain sorghums, barley, oats, gum naval stores, and dry edible smooth peas. In total, there are thirty commodities which accounted for most of the support outlay in 1949.

FIGURE 3



Supply, Price, and Distribution Data. Estimates were obtained as of October, 1950, on carry-in; production; imports and exports; total

TABLE 1
SUPPLY, PRICE AND DISTRIBUTION ESTIMATES, OCTOBER, 1950—PRELIMINARY

Commodity	Supply				Distribution				1949 Price	Without Support		Estimated Price Elasticity at 1949 No-Support Price
	Carry-in	Production	Net Imports	Total Supply	Carry-out, Farm-use, Waste	Total Sales	Net Govt. Acquisition	Commercial Sales		1949 Price	Commercial Sales	
1	2	3	4	5	6	7	8	9	10	11	12	13
	mil. units								dol.		mil. units	
Corn, bu.	825	3,378	—	4,203	3,258	945	250	695	1.25	1.00	835	—.67
Cotton, lb.	2,644	7,954	128	10,726	3,338	7,388	—374*	7,388	.2858	.2858	7,338	—.6
Peanuts, lb.	120	1,876	—	1,996	394	1,602	697	905	.104	.050	1,600	—.40
Rice, bu.	5.4	89.5	.1	95	7.7	87.3	—	87.3	1.87	1.47	87	—.6
Wheat, bu.	308	1,146	2	1,456	303	1,153	113	1,040	1.86	1.50	1,153	—.41
Tobacco, lb.												
Flue-cured	1,538	1,115	—	2,653	1,444	1,209	—41*	1,209	.472	.472	1,209	—.45
Burley	974	560	—	1,534	997	537	3	534	.452	.440	537	—.2
Whole milk (mfg.), lb.	2,560	35,000	308	37,868	2,868	35,000	972	34,028	.0314	.0300	35,000	—.6
Eggs, doz.	73	5,168	8	5,249	50	5,199	205	4,994	.455	.42	5,175	—.42
Farm chickens, lb.	121	4,383	17	4,521	183	4,338	—	4,338	.257	.257	4,338	—.89
Hogs (excluding retail lard), lb.	469	10,333	3	10,805	474	10,331	—	10,331	.181	.181	10,331	—.8
Beef cattle, lb.	149	9,539	226	9,914	121	9,793	—	9,793	.198	.198	9,793	—.8
Lambs and mutton, lb.	26	605	2	633	14	619	—	619	.224	.224	619	—.8
Butterfat, lb.	32	941	—	973	18	955	70	885	.615	.56	955	—.75
Potatoes, bu.	—	402	10	412	73	339	81	258	1.28	.75	288	—.15
Wool (scoured), lb.	247	111	155	513	170	343	38	305	1.233†	1.183	315	—.75
Beans, dry edible, cwt.	5.7	20.1	.3	26.1	1.4	24.7	9.3	15.4	6.68	3.50	16.8	—.12
Barley, bu.	101	238	—4	335	175	160	18	142	1.05	.95	150	—.51
Flaxseed, bu.	7	43.7	.002	50.7	8.8	41.9	4.8	37.1	3.58	3.20	40	—.61
Cottonseed, ton	.01	6.61	—	6.62	.16	6.46	—	6.46	43.40	43.40	6.46	—.7
Grain sorghums, bu.	18	153	—	171	69	102	78	24	1.00	.75	27	—.38
Oats, bu.	295	1,323	8	1,626	1,281	345	6	339	.65	.59	359	—.55
Tung nuts, ton	.059	.066	.235	.360	.047	.313	—	.313	64.40	64.40	.313	—.3
Honey, extracted, lb.	60.3	193	7.2	260.5	81.2	179.3	—	179.3	.1131	.1131	179.3	—.5
Honey, comb, lb.	10.6	34	1.3	45.9	14.2	31.7	—	31.7	.281	.281	31.7	—.4
Mohair, lb.	17.8	14.6	.1	32.5	14	18.5	—	18.5	.463	.463	18.5	—.7
Turkeys, lb.	56	768	3	827	94	733	15	718	.351	.345	.725	—.55
Sweet potatoes, bu.	—	54.2	—	54.2	30.5	23.7	.1	23.6	2.13	2.11	23.7	—.45
Soybeans, bu.	3.1	222.4	—	225.5	3.1	222.4	—	222.4	2.08	2.08	222.4	—.6
Turpentine, gal.	8	34	.7	42.7	6.5	36.2	—	36.2	.38	.38	36.2	—.40
Rosin, cwt.	1.1	10.5	—	11.6	.7	10.9	1.8	9.1	6.47	5.00	9.6	—.18
Peas, dry edible, cwt.	1.2	3.0	.1	4.3	.7	3.6	1.2	2.4	3.54	3.00	2.45	—.11

* Negative changes in net acquisitions by government are included in commercial sales.
† 49.3 cents per pound grease.

supply; carry-out, farm use, or waste; total sales; net government acquisition; commercial disappearance; and realized season average on-farm price. Total supply is defined here as the sum of carry-in, production, and net imports; total supply minus the sum of carry-out, farm use and waste is total sales; total sales minus net government acquisition yields commercial sales.

The 1949 Market Price and Utilization. Given total supply of a supported commodity, the demand functions for commercial and for reserve or other channels must be known in order precisely to estimate commercial sales and market price had there been no direct support programs. This approximation, which alone is necessary to determine differences in first costs, is indicated in Figure 3.

OQ_t is known total supply. Commercial sales, Q_m, are measured to the right from O and disposition in other channels—$(Q_t - Q_m)$—is measured to the left from Q_t. P_s and Q_s are known 1949 season average on-farm support price and associated sales. D_c is commercial demand and D_r is reserve demand, where these two outlets exhaust the total supply. A competitive context is assumed at the farm level and prices will therefore be equalized in the two outlets. Precisely to calculate first costs and their distribution under diversion between users and government, the market price at which Q_m would move and the net regression of quantity on farm price must be approximated for each commodity. Given the commercial and reserve demand functions and the total supply, market price and commercial utilization without support—the bases here for cost measurement—and the quantities moving into trade at the various support prices could be determined. However, only Q_t and the co-ordinate Q_s, P_s are known. Other functions and magnitudes must be approximated.

Estimated Demand Elasticities and Quantity-Price Regressions. The estimated demand elasticities at the co-ordinate Q_m, P_m were obtained from commodity specialists in government and the experiment stations, supported by price analyses where available. However, in some cases, informed judgment of such specialists is the only available basis for estimating the elasticities shown in Table 1. These estimates are relevant only to commercial sales and to 1949 conditions. Elasticities are, therefore, high relative to long-run estimates, since 1949 was a high demand year and since sales rather than total supply define the quantity variable. The quantity-price regressions were extrapolated from the elasticity estimates as linear functions, since there appear to be no compelling theoretical bases for selection of more complex hypotheses.[3] The estimates here appear to be the best available approximations of the relationships necessary to approximate the magnitude and distribution of costs. The limitations consequent upon inadequate empirical verification of these magnitudes and regressions must be stressed.

---

[3] Commercial utilization at the various support prices was calculated by the equation $Q_s = Q_m - \Delta Q_m$ where $\Delta Q_m = -N \cdot P_m / Q_m \cdot \Delta P_m$. P_m and Q_m are the estimated price and sales which would have prevailed without support, $-N$ is estimated demand elasticity

The total supply and perhaps the demand prevailing in 1949 are partly attributable to preceding support and control programs. Had there been no such programs in preceding years, available supply might have been smaller and demand levels, at least for goods with close substitutes, might have been higher. Thus, some part of the cost of support in 1949 may well be attributable to earlier programs. No effort is made to estimate probable costs had there been no such earlier programs, nor to estimate costs had various production control devices been more or less effective. Therefore, the estimated market price and sales without support in 1949 can be taken as equilibrium magnitudes only in the narrow sense that the estimated price would have cleared the market of estimated commercial sales.

The Support Standards. Under the Agricultural Act of 1948, parity prices are computed as follows: The average price of the commodity over the preceding ten years, 1939-48, is divided by the quotient of the index of prices received by farmers on the average over the same period and the index of prices received on the average from January 1, 1910, through December 31, 1914, to yield the adjusted base price. The parity index is the quotient of the index of prices paid, including interest and taxes, at the beginning of the 1949 marketing season and the same index for the period January 1, 1910, through December 31, 1914. The "new" or modernized parity price is the product of the adjusted base price and the parity index. "Old" parity price, calculated by the methods effective prior to the passage of the Agricultural Act of 1948, is the product of the average price over the base years and the 1949 index of prices paid at the beginning of the marketing season. The "effective" parity price for 1949 as defined here is the higher of the two parities—old and new. "Transitional" parity price under the literal terms of both the 1948 statute and of the Agricultural Act of 1949 would not have been effective for 1949.[3] However, the legislative history of Title II of the 1948 law clearly indicates that had it become

---

at these co-ordinates under 1949 conditions, ΔP_m is the difference between the support price and estimated price without support and ΔQ_m is the associated decrease in sales. Estimates of commercial sales at the various support prices—and thus of diversion—were also made assuming constant-elasticity demand functions with the elasticities shown in column 13 of Table 1. These were calculated from the equation: $\log Q_s = \log Q_m + N\ (\log P_m - P_s)$, where P_s is any support price and Q_s the associated commercial sales. Differences in these estimates were not in general great for the important commodities. The linear function will, of course, always indicate greater diversion to achieve given support prices than will the constant elasticity function.

[3] The terms "new," "old," "effective," and "transitional" parities as used in the cost calculations following have the meanings set out in this section.

effective in 1949 the transitional provision would also have been effective in that year. When effectuation of Title II was deferred until 1950, application of the transitional parity provision was also deferred until 1950 to avoid a 10 per cent fall in parity prices in a single year. Therefore, transitional parity prices for 1949, defined here as old parity minus 5 per cent of old parity for all commodities for which old parity exceeds new parity and as new parity wherever these prices exceed old parity, are introduced as one of the bases for cost calculations. Under the 1948 Act, transitional parity would have applied to all commodities in the first year in which Title II was effective. Under the 1949 law, transitional parity prices would not have been applicable to basic commodities until 1954.

Under the Agricultural Act of 1949, calculation of parity prices follows the general lines laid out in the 1948 statute. The adjusted base price includes the influence of subsidies received under the Emergency Price Control Act of 1942. The parity index includes farm wages. New parities under the 1949 Act are higher than those defined by the 1948 Act for all basic commodities. Old, new, transitional, and effective parities as defined here have the same operational meaning as under the 1948 statute but there are differences in magnitudes. Transitional parities would not have been applicable to basic crops in the first year of the 1949 Act.

The statements of the Secretary of Agriculture on April 7 and April 25, 1949, specified that the Brannan income support standard should be based upon a moving average of cash receipts from farm marketings, exclusive of government payments, in the first ten of the immediately preceding twelve years. The index of prices paid—including interest, wages, and taxes—was calculated on the base 1938-47 = 100.[4]

Cash receipts in each of the years 1938-47 were translated into base period terms through dividing by the adjusted index of prices paid for the same year. Such average annual receipts over the base period were 15.844 billion dollars. The July 1, 1949, parity index with 1938-47 = 100 was 1.52.[5] Therefore, the equivalent of average annual cash receipts over the years 1938-47 in terms of July 1, 1949, purchasing power was 15.844 billion dollars multiplied by 1.52 or 24.108 billions. This would have been the income support standard for 1949. This was

---

[4] There was no statutory authority for inclusion of farm wages in the index of prices paid when the Secretary made his statement. However, inclusion of wages leads to a difference of less than 1 per cent in the adjustment factor. The 1938-47 base was used for 1949 because the Secretary advocated 1939-48 for application in 1950. This is an arbitrary judgment. The Secretary may have selected the 1939-48 base because of the prices it yielded rather than in deference to the moving base period concept. He also advocated the two-year lag partly that "the Congress may become aware of the effects of the moving standard before the new calculations are put to use."

[5] This was the July 1, 1949, value of 250, on the 1909-14 base, divided by 164.3, the average annual index of prices paid over the years 1938-47.

1.27198 as large as the actual average annual cash receipts of 18.953 billion dollars over the preceding ten years. The Brannan support standard prices for specific commodities are, therefore, the products of their actual average annual prices in the years 1939-48 and the adjustment factor 1.27198.

Brannan support standard prices for 1949 were in all cases lower than the higher of the two effective parity prices defined by the Acts of 1948 and of 1949.[6] Parity prices defined by the 1949 Act were not lower than any defined by the 1948 Act and were higher for tobacco, milk, hogs, beef cattle, lambs, butterfat, wool, rice, dry edible beans, flaxseed, cottonseed, tung nuts, turkeys, sweet potatoes, soybeans, rosin, and dry edible beans. Effective parity prices were the same under the two statutes for peanuts, corn, cotton, wheat, potatoes, barley, oats, honey, and turpentine. The Brannan support standard price was slightly higher than the effective parity under the 1948 Act for cottonseed, tung nuts, and soybeans and was the same for rice. For all other products, the parity calculated by the 1948 statute exceeded the Brannan support standard. Thus, in terms of governing support standards for 1949, the Brannan prices were considerably the lowest of the three. However, a maximum of 90 per cent was applicable under the 1948 and 1949 statutes as against 100 per cent of the Brannan prices. The Brannan standard exceeded 90 per cent of the effective parity price as calculated by both laws for all the listed commodities except for peanuts, cotton, wheat, eggs, potatoes, barley, grain sorghums, oats, comb honey, and turpentine. The Brannan standard was less than 90 per cent of parity under the 1949 law—but not the 1948 Act—for whole milk and butterfat. Thus, the full Brannan standard was lower than the 90 per cent maximum under the two Acts for several commodities involving heavy support outlays. Transitional parity prices under the Act of 1949 would have been higher than those defined either by the 1948 law or the Brannan proposal, prices for which would have exceeded the 1948 transitional parities only for burley tobacco, dry edible beans, cottonseed, and tung nuts. New parity price levels set out in the Agricultural Act of 1949 were not exceeded by the new parities of the 1948 Act or by the Brannan levels. The Brannan standard exceeded new parities under the 1948 law for corn, cotton, peanuts, rice, burley tobacco, dry edible beans, cottonseed, tung nuts, soybeans, and turpentine.

Thus, in terms of the parity or support standard as a component of costs of support, the 1949 Act is the highest of the three. Effective

---

[6] While Brannan support standard prices—100 per cent of which was required for Group I commodities—should properly be compared to 90 per cent of parity under the 1948 and 1949 statutes, direct comparison is made here because the Brannan support standard is later substituted for the 1948 and 1949 parities and various levels of support defined in that law are combined with the Brannan prices.

TABLE 2
PARITY PRICES AND SUPPORT LEVELS FOR 1949 PRODUCTION

Commodities	Announced 1949 Support Levels	Agricultural Act of 1948—Title II					Agricultural Act of 1949					Brannan Support† Standard
		Parity Prices			Minima on Mandatory Products		Parity Prices			Minima on Mandatory Products		
		Old	New	Transitional*			Old	New	Transitional*			
1	2	3	4	5	6	7	8	9	10	11	12	13
	per cent	dol.	dol.	dol.	per cent	dol.	dol.	dol.	dol.	per cent	dol.	dol.
Corn, bu.	90	1.54	1.37	1.46	72	1.11	1.54	1.45	1.46	77	1.19	1.39
Cotton, lb.	90	.3013	.2599	.2862	80	.2170	.3013	.2752	.2862	85	.2561	.2604
Peanuts, lb.	90	.117	.0870	.1111	90	.105	.117	.0920	.1111	90	.105	.0871
Rice, bu.	90	1.98	2.11	2.11	72	1.52	1.98	2.23	2.23	87	1.94	2.11
Wheat, bu.	90	2.15	1.76	2.04	76	1.63	2.15	1.86	2.04	78	1.68	1.74
Tobacco, flue-cured, lb.	90	.472	.466	.466	90	.425	.472	.491	.491	90	.442	.462
Tobacco, burley, lb.	90	.448	.464	.464	90	.418	.448	.491	.49	90	.442	.468
Whole milk (mfg.), lb.	90	.0390	.0406	.0406			.0390	.0446	.0446	75	.0334	.0397
Eggs, doz.	90	.529	.443	.502			.529	.468	.502			.431
Farm chickens, lb.	—	.276	.286	.286			.280	.301	.301			.277
Hogs, cwt.	90											
March	—	17.70	18.20	18.20			17.70	19.20	19.20			17.80
September	—	17.40	17.60	17.60			17.40	18.70	18.70			
Beef cattle, cwt.	—	13.30	16.20	16.20			13.30	17.30	17.30			15.80
Lambs, cwt.	—	14.50	17.50	17.50			14.50	18.80	18.80			17.00
Butterfat, lb.	90	.642	.643	.643			.642	.714	.714	75	.534	.631
Potatoes, bu.	60	1.84	1.56	1.75	60	1.10	1.84	1.64	1.75	60	1.10	1.51
Wool, lb.	90	.447	.492	.492	60	.295	.447	.520	.520	60	.312	.483
Beans, dry edible, cwt.	80	8.16	7.98	7.98			8.16	8.44	8.44			8.01
Barley, bu.	72	1.52	1.19	1.44			1.52	1.25	1.44			1.16
Flaxseed, bu.	90	4.12	4.15	4.15			4.12	4.39	4.39			4.07
Cottonseed, ton	90	54.80	64.40	64.40			54.80	68.20	68.20			64.50
Grain sorghums, bu.	70	2.96	2.28	2.81			2.96	2.40	2.81			2.24
Oats, bu.	70	.978	.804	.929			.978	.846	.929			.787
Tung nuts, ton	60	—	100.00	100.00			—	105.00	105.00	60	63.00	100.87
Honey, extracted, lb.	—	.177	.166	.168			.177	.175	.175	60	.106	.163
Honey, comb, lb.	—	.314	.283	.298			.314	2.98	2.98	60	.188	.277
Mohair, lb.	—	.671	.698	.698			.671	.734	.734	60	.440	.682
Turkey, lb.	90	.354	.351	.351			.354	.373	.373			.342
Sweet potatoes, bu.	80	2.13	2.18	2.18			2.13	2.29	2.29			2.15
Soybeans, bu.	90	2.32	2.39	2.39			2.32	2.54	2.54			2.40
Turpentine, gal.	80	1.13	.756	1.07			1.13	.798	1.07			.740
Rosin, cwt.	80	5.93	6.31	6.31			5.93	6.68	6.68			6.19
Peas, dry edible, cwt.	60	5.08	5.52	5.52			5.08	5.82	5.82			5.46

* Transitional here is effective parity multiplied by .95 wherever old parity exceeds new parity and otherwise is new parity.
† Based on 1938–47.

standards defined by the 1948 law were higher for most commodities than the Brannan standards, and the excess of Brannan standards in those commodities for which they were higher was not great. The comparison of Brannan standards to new parities is relevant in considering future costs.[7]

The Support Levels. Under the Agricultural Acts of 1948 and 1949, no commodity would be supported at a level higher than 90 per cent of effective parity price except after findings that specific prices were out of line or where the increase would be in the national interest.

Under the 1948 law, minimum percentages of parity price at which support is mandatory for basic crops are defined by the supply percentage—the ratio of total supply and normal supply.[8] Normal supply is estimated annual domestic consumption plus imports minus exports plus a carry-over allowance. Definitions of carry-over, normal supply, and total supply vary among commodities. For basic crops, support would be mandatory at a level of 90 per cent of parity if the supply percentage were not greater than 70. The minimum required percentage of parity for mandatory support decreases 1 per cent for each increase of 2 per cent in supply percentage to a minimum of 60 per cent of parity without allotments or quotas. With quotas or allotments, required minimum support for basics is 120 per cent of the levels without quotas or allotments to a maximum of 90 per cent of parity. Guaranteed support falls to 50 per cent of parity price if marketing quotas have been disapproved. With quotas, support is required at a minimum of 90 per cent of effective parity for tobacco. Minimum supports were set for wool and potatoes at 60 per cent of parity but support percentage is not related to supply percentage. No minima were defined for other products.

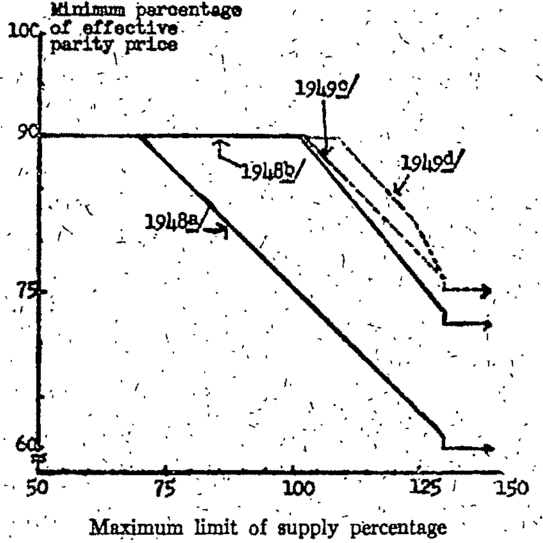
Definitions of carry-over, normal supply, and total supply for some of the commodities differ in the 1948 and 1949 laws. However, supply percentages were calculated similarly except for corn and cotton. Under the 1949 statute, support for tobacco, corn, wheat, and rice could not fall below 90 per cent of parity if the supply percentage were no greater than 102. Then, for every 2 per cent increase in the supply percentage, the minimum required level of price support decreased 1 per cent to a level of 76 per cent of parity if the supply percentage were no greater than 130. For larger supply percentages, a minimum of 75 per cent of parity was set. Cotton and peanuts are held at higher minimum levels—with a 90 per cent minimum if supply percentage did not exceed 108, decreasing 1 per cent of parity price for each 2 per cent increase in supply percentage to a level of 82 per cent of parity if supply percentage did not exceed 124. Minimum required support thereafter fell 1 per cent of parity for each increase of 1 per cent in supply percentage to a floor of 76 per cent of parity if supply percentage did not exceed 130. For larger supply percentages, support was mandatory at a minimum of 75 per cent. These schedules, shown for both laws in Figure 4, would be applicable only if quotas had not been disapproved. Tobacco support was mandatory at 90 per cent of parity price if quotas were effective but no support would be offered if quotas were disapproved.

---

[7] Comparison of support standards in subsequent years would involve several issues: the effect of dropping low income years and adding high income years in the Brannan moving income base versus the effects of the moving price bases in calculating modernized parity prices; effective parity prices under the 1949 Act are higher than transitional parity on commodities accounting for a large share of program costs, and by 1954 and probably by 1953 on such commodities the new parity prices would be effective; finally, support under both the 1948 and 1949 statutes is related to supply percentage and the flexibility of support level might offset the lower parity or support standard as defined by the Brannan Plan. These points are discussed further in the section dealing with limitations associated with calculations based on a single year.

[8] The supply percentages here utilize past data on production, utilization, and carry-over. There is no adjustment for trends or unusual conditions as authorized by the laws. Official determination of supply percentages prior to the beginning of the marketing year might have reflected such adjustments. Further, they would have been based on preliminary estimates. Supply percentages might have differed somewhat from those shown here.

FIGURE 4



[a] If quotas or allotments not effective.

[b] If quotas or allotments effective. Minimum of 90 per cent on any crop of tobacco if quotas effective. Minimum of 50 per cent on any basic crop if quotas disapproved.

[c] Tobacco, corn, wheat, and rice, 90 per cent minimum for tobacco if quotas are in effect; 50 per cent minimum on basics if quotas disapproved.

[d] Cotton and peanuts.

Except for tobacco, support fell to 50 per cent on basics if quotas were disapproved. A minimum level of 90 per cent held for basics in the first year of application of the statute, if quotas had not been disapproved and if quotas or allotments were effective.

Under the 1949 Act, minimum support was required at 60 per cent of effective parity for wool, mohair, tung nuts, honey, and Irish potatoes. A minimum of 75 per cent was set for milk and butterfat and their products. Provision was also made for sliding scales for nonbasic crops, relating minimum support levels to supply percentage if marketing quotas, agreements, or orders were effective. However, there were neither quotas nor enabling legislation for these commodities. Commodities other than basics and designated nonbasics were to be supported up to a maximum level of 90 per cent with no specified minima as funds were available and as producers conformed to standards set out in the Act.

The Brannan proposal unequivocally assured support at 100 per cent of the income support standard prices for the commodities included in Group I. However, there is explicit statement that other commodities would not necessarily be supported at that level.

Percentages of parity or support standards among the programs can be compared meaningfully only with respect to those commodities for which mandatory minimal support is systematically related to supply. Support for Group I commodities under the Brannan Plan is not related to supply variations.[9] Both the 1948 and the 1949 statutes provide for a maximum level of 90 per cent of the governing parity prices. With respect to mandatory minima, comparison is facilitated by reference to Figure 4. In the absence of quotas or allotments, support under the 1948 law decreased from the 90 per cent maximum at a smaller supply percentage and at the same supply percentage reached a lower minimum than under the 1949 statute. Even with the 120 per cent provision applicable with quotas, the schedule under the 1948 Act is slightly lower than the schedule for tobacco, corn, wheat, and rice, and is considerably lower than the schedule for cotton and peanuts under the 1949 law.

There are, therefore, three reasons that costs under the 1949 Act would be expected to exceed those associated with the 1948 statute: (1) effective parity prices are higher; (2) minimum support schedules are higher; (3) support is mandatory on more commodities.

---

[9] The statement of April 7, 1949, provides for adjustment of support prices "for one or more of the Group I commodities in order to maintain feed ratios or feed value relationships." There has, apparently, since been informal discussion of extending less than 100 per cent support to some of the Group I products. The Secretary made clear at the outset that he offered no guaranteed income plan. He stated on April 25, 1949, that his plan "cannot provide farmers a guaranteed level of income unless Congress should make a flat commitment on every commodity produced by farmers, and I am sure nobody expects this will be done."

Combinations of Standards and Levels. Price support in 1949 was in general at a high level. Many commodities were mandatory under Title I of the Agricultural Act of 1948 which governed 1949 support operations.[10] Therefore, in specifying maximum support under the three plans, the maximum authorized percentages of parity or support standard price was applied to the mandatory commodities. Actual 1949 percentages were then applied to the nonmandatory commodities. Under minimum support conditions, the minimum required levels with 1949 supply percentages were applied to basic and mandatory commodities as specified in the Acts of 1948 and 1949. For both Acts, the average difference between maximum and minimum percentage of support for mandatory products weighted by farm value was then subtracted from the announced 1949 percentage for the nonmandatory products, down to a minimum of 60 per cent. Maximum Brannan Plan levels were set arbitrarily at 100 per cent of standard for all commodities. The "minimum" or "partial" Brannan levels were then set—again arbitrarily—as 100 per cent on Group I products and as announced 1949 percentages for all others. This was done on the assumption that any Brannan proposal support would be at a high level. Thus, the Brannan percentages called minimum or partial here are really equivalent to high-level support under the two statutes.

Twenty different combinations of support standard and support percentage are analyzed: maximum and minimum percentages applied to the effective parities or support standards; for the Acts of 1948 and 1949, maximum and minimum percentages applied to transitional and to new parity prices; minimum percentages defined by the 1949 statute applied to parities defined by the 1948 Act; the same comparison using parities defined in the 1949 law and minimum support levels as set out in the 1948 Act; maximum and minimum percentages defined by the two statutes applied to Brannan proposal prices.

Calculations. The following arithmetical calculations are made: (1) the support price, obtained by applying the appropriate support percentage to the parity or income support standard; (2) the difference between the support price and estimated market price without support; (3) the product of this difference and the estimated commercial utilization at the market price without support, yielding total first costs for the commodity; (4) the product of the support price and estimated sales at that price; (5) the product of market price and sales in the absence of support; (6) the difference between these magnitudes, yielding total first cost to consumers with diversion; (7) the product of support price and the difference between sales with and without support, approximating total first costs to government with diversion. No effort is made to indicate which, if any, of the products would be supported through direct payments. Total first costs as defined here are independent of method of support. In estimating the impact of costs upon users and government, it is implicitly assumed that all support would be achieved through diversion.

---

[10] For basic crops at 90 per cent if quotas not disapproved, Steagall commodities at not less than 60 per cent of parity or comparable price nor more than the 1948 support price, except for Irish potatoes harvested before January 1, 1949, milk and its products, hogs, chickens, and eggs which were mandatory at 90 per cent; other commodities to be supported at prices assuring parity incomes insofar as available funds permitted and producers complied with specified production goals and marketing regulations.

III. *Cost Comparisons*

The cost comparisons are organized in terms of relative magnitudes of total first costs, the scope of support in number and value of commodities affected, major cost items among the support commodities, and both the distribution of costs between users and government and the acquisition of stocks by government where diversion is used to achieve the support price.

Maximum Payments Under the Three Plans. With effective parity or support standards and maximum percentages, total first costs in 1949 would have been highest under the terms of the Agricultural Act of 1949 at approximately 2.4 billion dollars, next highest under the Agricultural Act of 1948 at about 2.062 billions, and slightly lower under the Brannan proposal at about 2.009 billions. Costs under the 1948 Act would thus have been some 335 million dollars lower than under the 1949 statute but about 53 millions more than under the Brannan Plan. Estimated market value at support prices of the supported commodities would have been about 9 billion dollars under the 1948 law and about 10.3 billions for both the 1949 law and the Brannan Plan. No support operations would have been required under the several programs for the following commodities: (1) the 1948 law—cotton, flue-cured and burley tobaccos, hogs, chickens, wool, tung nuts, turkeys, and sweet potatoes, with beef cattle, lambs, honey, and mohair not included under this statute, since they were neither mandatory under its terms nor announced for support in 1949; (2) under the 1949 law—cotton, flue-cured tobacco, hogs, wool, and sweet potatoes, with beef cattle and lambs not included; (3) the Brannan proposal—cotton, flue-cured tobacco, hogs, turkeys, and beef cattle and lambs, the latter two of which were not announced for support in 1949 and were mandatory only under the Brannan program. Thus, fewer commodities with lower aggregate market value would have been supported under the 1948 statute, but total first costs in 1949 would have been slightly lower under the Brannan Plan.

Had support been effectuated through diversion, added costs to users would have been 766 million dollars or 37 per cent of total first costs under the 1948 Act, 794 millions or 33 per cent of total first costs if the 1949 statute had been effectuated, and 601 millions or 30 per cent of total costs under the Brannan Plan. Thus, under the Act of 1948 estimated first costs to users would have been lower by 28 million dollars than under the 1949 Act but 165 millions more than under the Brannan Plan. Costs to government would have been about 1.3 billions, 1.6 billions, and 1.4 billions for the 1948 and 1949 laws and the Brannan program, respectively. Thus, if all support were achieved by diversion, the 1949 Act would have been most costly to government and the 1948 Act least costly.

Under the Agricultural Act of 1948, total first costs for corn, wheat, milk, eggs, and potatoes would have exceeded 1.6 billion dollars or more than three-fourths of total first costs. Total first costs under the Act of 1949 for these same commodities and for cottonseed would have been more than 100 million dollars each and 1.8 billions in total or about 77 per cent of total first costs. Added costs to users would have been relatively high under both plans for wheat, eggs, and potatoes. Aggregate costs under the Brannan Plan for corn, wheat, milk, potatoes, and cottonseed would have been approximately 1.3 billion dollars or nearly two-thirds of total first costs.

In summary, high-level support in 1949 would have been about equally costly under the 1948 Act and the Brannan program, with costs under the 1949 statute about 16 per cent higher. Differences among the estimates are surprisingly small. With diversion, added costs to users would have been highest under the 1949 law and lowest under the Brannan Plan although the highest percentage of total first costs would have impinged upon users under the 1948 Act. Costs to government would have been highest under the 1949 law and lowest under the Act of 1948. For all plans, the bulk of costs would have been concentrated in a few commodities.

Minimum Payments Under the Three Plans. In appraising costs associated with effective support standards and minimum support percentages, the arbitrary specification of minimum support under the Brannan Plan should be noted. Costs under the Brannan program would have been highest at about 1.4 billion dollars or a decrease of 560 millions from costs with full support. Costs would have been 877 millions and 593 millions for the 1949 and 1948 Acts, respectively, or about 1.5 billions less than under the maxima.

If diversion were used, about 70 per cent of total cost under the Brannan Plan would have fallen on government with about 60 per cent so distributed under both statutes. Estimated market price would have exceeded support price under the 1948 law for fifteen commodities, for seventeen under the Act of 1949, and twelve under the Brannan Plan.

Costs by commodities would have exceeded 100 million dollars only for wheat under the 1948 Act; for corn, wheat, milk, and potatoes under the 1949 law; and for corn, wheat, milk, and potatoes under the less-than-full Brannan payments. In all cases, the five most costly commodities together would have comprised more than 70 per cent of total first costs.

Total first costs to users would have been less than under the respective maxima by 530, 458, and 187 million dollars for the 1948 law, the 1949 law, and the Brannan program. Costs to government in the same order would have decreased by 939, 1,063, and 373 millions. Milk and butterfat would be supported at 75 per cent of parity under this version of the 1949 Act, while with the blanket adjustment of nonmandatory commodities, they drop only to 79 per cent of parity under the 1948 Act. This probably understates the differences in costs between these two plans with minimum percentages of support.

Transitional Parity Prices. Transitional parity prices are applicable to all commodities under the 1948 statute but only to nonbasics until 1954 under the Agricultural Act of 1949. With transitional parity standards and maximum support percentages, total first costs would have been about 1.7 billion dollars under the 1948 Act and about 2.2 billions under the 1949 statute, or decreases from costs with effective parity prices of 362 millions and 168 millions. First costs to users would have declined some 111 million and 76 million dollars from costs with effective parities under the 1948 and 1949 laws to totals of 655 and 718 millions, respectively. Costs to government, if diversion were used, would have been approximately 1 billion and 1.5 billions, down 252 and 92 millions, respectively, for the 1948 and 1949 laws from the levels which would have prevailed with effective parities. Nine commodities would not have needed support under the 1948 Act and seven under the 1949 law. Costs would have been concentrated in corn, wheat, milk, eggs, and potatoes under the 1948 statute and in these same products and cottonseed under the 1949 Act. In both Acts, the scope of support in terms of market value—without support—of commodities eligible for price support would have been about the same as with effective parities.

Substituting transitional for effective parities and with minimum percentages, total first costs would have decreased by 131 million dollars to less than 500 millions under the 1948 statute but by only 18 millions to about 860 millions under the 1949 law. With diversion, approximately 58 per cent of costs would have impinged on government under the 1948 law with about 62 per cent under the Act of 1949. Peanuts, wheat, milk, and potatoes would have been relatively costly under the 1948 program, while these same products and corn and cottonseed would have been major cost items under the 1949 law.

In short, substitution of transitional for effective parity prices would have involved significant reductions in costs under the 1948 Act but not under the 1949 statute.

New Parity Prices. Under the terms of the 1948 law and for nonbasic crops under the 1949 statute, new parity prices could have been effective in 1949 only where they exceeded transitional prices. Under the 1949 law, neither transitional nor new parity prices could have been effective for basic crops if old parity exceeded new parity for these products. However, with no changes in the determinants of parity prices and support percentages, introduction of new parity prices provides a rough projection of costs over the long run. From the total cost with effective parities and maximum percentages, total first costs would drop more than 50 per cent to about 926 million dollars under the 1948 statute and about 35 per cent to 1.5 billions under the 1949 law. In both cases, more than 65 per cent of first costs would fall on government if diversion were used. More than 70 per cent of total first costs would have been incurred in support of corn, wheat, milk, potatoes, and cottonseed under both programs.

With new parity prices for all commodities and minimum percentages of support as defined here, first costs under the 1948 Act would have decreased about 50 per cent below costs with effective parity to 285 million dollars and under the 1949 Act about 35 per cent to 566 millions. With diversion, about half of first costs would fall on government under the 1948 Act and almost two-thirds would be so distributed under the 1949 Act. Costs would have been concentrated in peanuts, milk, butterfat, and cottonseed under the 1948 law and in corn, milk, butterfat, and chickens under the 1949 statute. Again, change in the definition of parity prices results in significant changes in magnitude of first costs.

Combined Support Standards and Percentages. Parity prices defined in one act are combined here with minimum support percentages defined in the other. Combination of minima defined under the 1949 statute with effective parity prices defined by the 1948 law results in an increase of about 13 per cent in total first costs to 671 million dollars from 593 millions with minima as defined in the 1948 Act. Combination of 1948 Act percentages and 1949 Act parities would result in a decrease of about 10 per cent in costs to 787 millions from 877 millions with effective parities and minima as defined in the 1949 law.

Brannan Support Standards and Statutory Support Percentages. Support prices calculated according to the Brannan proposal are associated with maximum and minimum support percentages defined by the 1948 and 1949 laws, roughly to indicate the effects of differences in price standards. With maximum support percentages, substitution of Brannan prices for effective parities as defined in the 1948 law would have cut total costs from more than 2 billion dollars to less than 1 billion. Substitution of Brannan prices for effective parities defined by the 1949 law would have cut costs nearly 60 per cent—from 2.4 billions to 974 millions. Substitution of new for effective parities in the Act of 1948 yields a lower total first costs than would have accrued with Brannan prices and maximum percentages of support. In every other instance, the costs associated with Brannan prices are much lower than costs using other price standards and comparable support percentages. Approximately two-thirds of first costs would have fallen upon government with both 1948 Act and 1949 Act maxima associated with Brannan prices. Much the same results would have occurred if minimum levels of support specified by the two statutes were applied to the Brannan support standard prices. With percentages defined by the 1948 Act, total first costs would have dropped from 593 with effective parity to 248 millions with Brannan prices. With minima defined by the 1949 statute, costs would have fallen from 877 with effective parity to 286 millions with Brannan prices. Well over half the first costs would have borne on government in both cases.

Comparisons of Cost of Support. Differences in total first costs among the twenty plans considered here are summarized in Table 3. Total first costs in millions of dollars are shown in both rows and columns designated as "total." Then each cell indicates the difference in total first cost between the program indicated at the heads of the row and of the column defining the cell. The cells bounded by row 6 and column 6 indicate first the differences in cost among the three plans, with effective standards and both with maximum and minimum support percentages. Cells bounded by rows and columns 7 through 10 indicate the effects of introducing transitional parity prices. The effects of new parities are summarized in the cells bounded by rows and columns 11 through 14. Rows and columns 15 and 16 indicate roughly the effects of substituting for each other the minimum support percentages defined by the two statutes. Rows and columns 17 through 20 indicate the impact of substituting Brannan proposal support standard prices for the various parities defined by the two laws. This table makes clear that the Brannan Plan in 1949 would not have involved high outlays relative to the other two programs. In fact, so far as price standards are concerned—and therefore for given percentages of support—it is a less costly proposal at present than the Agricultural Act of 1948. However, after introduction of new parities and with no other changes, the

TABLE 3

Differences in Total First Costs Among Alternative Plans, in Millions of Dollars					Effective Parities						Transitional Parities				New Parities				'48 Parity '49 Level Minima	'49 Parity '48 Level Minima	Brannan Prices			
					Maxima			Manima			Maxima		Minima		Maxima		Minima				Maxima		Minima	
					'48	'49	Br.	'48	'49	Br.*	'48	'49	'48	'49	'48	'49	'48	'49			'48	'49	'48	'49
				Col.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
			Row	Total	2062	2397	2009	593	877	1449	1700	2229	462	859	926	1547	285	566	671	787	967	974	248	286
Effective Parities	Max.	'48	1	2062	×	−335	53	1469	1185	613	362	−167	1600	1203	1136	515	1777	1496	1391	1275	1095	1088	1814	1776
		'49	2	2397	335	×	388	1804	1520	948	697	168	1935	1538	1471	850	2112	1831	1726	1610	1430	1423	2149	2111
		Br.	3	2009	−53	−388	×	1416	1132	560	309	−220	1547	1150	1083	462	1724	1443	1338	1222	1042	1035	1761	1723
	Min.	'48	4	593	−1469	−1804	−1416	×	−284	−856	−1107	−1636	131	−266	−333	−954	308	27	−78	−194	−374	−381	345	307
		'49	5	877	−1185	−1520	−1132	284	×	−572	−823	−1352	415	18	−49	−670	592	311	206	90	−90	−97	629	591
		Br.	6	1449	−613	−948	−560	856	572	×	−251	−780	987	590	523	−98	1164	883	778	662	482	475	1201	1163
Transitional Parities	Max.	'48	7	1700	−362	−697	−309	1107	823	251	×	−529	1238	841	774	1153	1415	1134	1029	913	733	726	1452	1414
		'49	8	2229	167	−168	220	1636	1352	780	529	×	1767	1370	1303	682	1944	1663	1558	1442	1262	1255	1981	1943
	Min.	'48	9	462	−1600	−1935	−1547	−131	−415	−987	−1238	−1767	×	−397	−464	−1085	177	−104	−209	−325	−505	−512	214	176
		'49	10	859	−1203	−1538	−1150	266	−18	−590	−841	−1370	397	×	−67	−688	574	293	188	72	−108	−115	611	573
New Parities	Max.	'48	11	926	−1136	−1471	−1083	333	49	−523	−774	−1303	464	67	×	−621	641	360	255	139	−41	−48	678	640
		'49	12	1547	−515	−850	−462	954	670	98	−153	−682	1085	688	621	×	1262	981	876	760	580	573	1299	1261
	Min.	'48	13	285	−1777	−2112	−1724	−308	−592	−1164	−1415	−1944	−177	−574	−641	−1262	×	−281	−386	−502	−682	−689	37	−1
		'49	14	566	−1496	−1831	−1443	−27	−311	−883	−1134	−1663	104	−293	−360	−981	281	×	−105	−221	−401	−408	318	280
'48 Parity '49 Level Minima			15	671	−1391	−1726	−1338	78	−206	−778	−1029	−1558	209	−188	−255	−876	386	105	×	−116	−296	−303	423	385
'49 Parity '48 Level Minima			16	787	−1275	−1610	−1222	194	−90	−662	−913	−1442	325	−72	−139	−760	502	221	116	×	−180	−187	539	501
Brannan	Max.	'48	17	967	−1095	−1430	−1042	374	90	−482	−733	−1262	505	108	41	−580	682	401	296	180	×	−7	719	681
		'49	18	974	−1088	−1423	−1035	381	97	−475	−726	−1255	512	115	48	−573	689	408	303	187	7	×	726	688
	Min.	'48	19	248	−1814	−2149	−1761	−345	−629	−1201	−1452	−1981	−214	−611	−678	−1299	−37	−318	−423	−539	−719	−726	×	−38
		'49	20	286	−1776	−2111	−1723	−307	−591	−1163	−1414	−1943	−176	−573	−640	−1261	1	−280	−385	−501	−681	−688	38	×

---

* Full payments on Group I commodities. Other commodities at percentages announced for 1949.

Differences in Total First Costs to Users, Farm Level, in Millions of Dollars					Effective Parities						Transitional Parities				New Parities				'48 Parity '49 Level Minima	'49 Parity '48 Level Minima	Brannan Prices			
					Maxima			Minima			Maxima		Minima		Maxima		Minima				Maxima		Minima	
					'48	'49	Br.	'48	'49	Br.	'48	'49	'48	'49	'48	'49	'48	'49			'48	'49	'48	'49
			Row	Col.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
				Total	766	794	601	236	336	414	655	718	195	327	321	474	132	202	255	309	357	361	118	123
Effective Parities	Max.	'48	1	766	×	− 28	165	530	430	352	111	48	571	439	445	292	634	564	511	457	409	405	648	643
		'49	2	794	28	×	193	558	458	380	139	76	599	467	473	320	662	592	539	485	437	433	676	671
		Br.	3	601	−165	−193	×	365	265	187	− 54	−117	406	274	280	127	469	399	346	292	244	240	483	478
	Min.	'48	4	236	−530	−558	−365	×	−100	−178	−419	−482	41	− 91	− 85	−238	104	34	− 19	− 73	−121	−125	118	113
		'49	5	336	−430	−458	−265	100	×	− 78	−319	−382	141	9	15	−138	204	134	81	27	− 21	− 25	218	213
		Br.	6	414	−352	−380	−187	178	78	×	−241	−304	219	87	93	− 60	282	212	159	105	57	53	296	291
Transitional Parities	Max.	'48	7	655	−111	−139	54	419	319	241	×	− 63	460	328	334	181	523	453	400	346	298	294	537	532
		'49	8	718	− 48	− 76	117	482	382	304	63	×	423	391	397	244	586	516	463	409	361	357	600	595
	Min.	'48	9	195	−571	−599	−406	− 41	−141	−219	−460	−523	×	−132	−126	−279	63	− 7	− 60	−114	−162	−166	77	72
		'49	10	327	−439	−467	−274	91	− 9	− 87	−328	−391	132	×	6	−147	195	125	72	18	− 30	− 34	209	204
New Parities	Max.	'48	11	321	−445	−473	−280	85	− 15	− 93	−334	−397	126	− 6	×	−153	189	119	66	12	− 36	− 40	203	198
		'49	12	474	−292	−320	−127	238	138	60	−181	−244	279	147	153	×	342	272	219	165	117	113	356	351
	Min.	'48	13	132	−634	−662	−469	−104	−204	−282	−523	−586	− 63	−195	−189	−342	×	− 70	−123	−177	−225	−229	14	9
		'49	14	202	−564	−592	−399	− 34	−134	−212	−453	−516	7	−125	−119	−272	70	×	− 53	−107	−155	−159	84	79
'48 Parity '49 Level Minima			15	255	−511	−539	−346	19	− 81	−159	−400	−463	60	− 72	− 66	−219	123	53	×	− 54	−102	−106	137	132
'49 Parity '48 Level Minima			16	309	−457	−485	−292	73	− 27	−105	−346	−409	114	− 18	− 12	−165	177	107	54	×	− 48	− 52	191	186
Brannan	Max.	'48	17	357	−409	−437	−244	121	21	− 57	−298	−361	162	30	36	−117	225	155	102	48	×	− 4	239	234
		'49	18	361	−405	−433	−240	125	25	− 53	−294	−357	166	34	40	−113	229	159	106	52	4	×	243	238
	Min.	'48	19	118	−648	−676	−483	−118	−218	−296	−537	−600	− 77	−209	−203	−356	− 14	− 84	−137	−191	−239	−243	×	− 5
		'49	20	123	−643	−671	−478	−113	−213	−291	−532	−595	− 72	−204	−198	−351	− 9	− 79	−132	−186	−234	−238	5	×

Brannan proposal with maximum payments would be approximately twice as costly as the 1948 statute and about one-third more costly than the 1949 law. The high costs of the 1949 statute with effective parities and maximum percentages are attributable to (1) the retention of many parity prices computed by the old formula; (2) the larger number of mandatory products; (3) the higher level of new parity prices as compared to those defined in the 1948 law; and (4) to the higher and less flexible minimum percentages than under the 1948 Act. It would be difficult on the basis of these data to distinguish between the Brannan Plan and the Act of 1948 as less costly at least for 1949. The Agricultural Act of 1949 is clearly the most costly. Further, if both the programs and the determinants of support prices remained unchanged, the decrease in cost of support with transitional parities would be negligible under the 1949 Act. The effects of new parity prices would also be less striking under the 1949 statute than under the 1948 law, which with new parities in a year like 1949 would have cost less than 1 billion dollars.

Comparative costs to users are summarized on the same kind of a grid in Table 4. The dependence of these estimates upon the accuracy of quantity-price regression coefficients has already been stressed. Within these limitations, several conclusions may be noted. With maximum percentages of payment, the Brannan proposal would add least to costs by users at the farm level. For all comparable combinations of parity price and support percentage, the 1948 Act would involve lower additional costs to users than would the 1949 statute. However, for comparable programs, the percentage of total first cost appearing as added costs to users would be greatest under the 1948 Act and least under the Brannan proposal both in dollars and as a percentage of total costs. Costs to government, again on the assumption that commodities are supported by diversion and again within the limitations consequent upon the lack of empirical verification of demand elasticities, would have been heaviest under the Act of 1949 and lowest under the Act of 1948. In terms of percentage of total first cost falling upon government, the Brannan Plan is generally highest and the Act of 1948 is lowest.

The relative diversion by commodities is indicated in Table 5. Support operations would not have been necessary in 1949 for the following commodities for which market price without intervention exceeded or equaled the highest of the support prices specified by the twenty plans: cotton; flue-cured tobacco; hogs, beef cattle, and lambs; and turkeys. Burley tobacco, sweet potatoes, and wool would have been diverted only under the full Brannan payments. Eggs would have been supported only under the maximum percentages and effective price support standards. Chickens would have needed support only under the 1949

TABLE 5
COMPARATIVE GOVERNMENT ACQUISITION OF STOCKS IF SUPPORT FOR ALL COMMODITIES WERE ACHIEVED BY DIVERSION FROM PRIMARY CHANNELS
(in Millions of Units)

	Effective Parity or Support Standard						Transitional Parity				New Parity				Minima		Brannan Prices			
	Maximum			Minimum			Maxima		Minima		Maxima		Minima				Maxima		Minima	
	1948 Act	1949 Act	Brannan	1948 Act	1949 Act	Brannan	1948 Act	1949 Act	1948 Act	1949 Act	1948 Act	1949 Act	1948 Act	1949 Act	1948 Parity 1949 Level	1949 Parity 1948 Level	1948 Act	1949 Act	1948 Act	1949 Act
Column No. ●	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Commodities																				
Corn, bu.	218	218	218	62	106	218	173	218	28	106	129	168	—	67	106	62	140	140		39
Cotton, lb.																				
Peanuts, lb.	704	704	475	704	704	364	639	704	639	704	362	420	362	420	704	704	364	364	364	364
Rice, bu.	15	19	23	2	17	15	15	19	2	17	15	19	2	9	13	5	15	15	2	13
Wheat, bu.	139	139	76	41	57	76	107	139	16	57	25	54			57	41	22	22		
Tobacco, flue-cured, lb.																				
burley, lb.		0	7		0	7		0		0		0		0		0				
Whole milk (mfg.), lb.	4550	7070	6790	1470	2380	6790	4550	7070	1470	2380	4550	7070	1470	2380		3640	3990	3990	980	
Eggs, doz.	290	290	57			57	171	171												
Farm chickens, lb.		210	300			300		210				210		210						
Hogs, cwt.																				
Beef cattle, cwt.																				
Lambs, cwt.																				
Butterfat, lb.	26	106	91			10	26	106			26	106					10	10		
Potatoes, bu.	52	52	44	11	20	10	48	48	17	17	20	42	11	13	11	20	35	35	9	9
Wool, lb.			5																	
Dry beans, edible, cwt.	2	2	3	1	1	2	2	2	1	1	2	2	1	1	1	1	2	2	1	1
Barley, bu.	11	11	17				7	7												
Flaxseed, bu.	4	6	7	1	2	4	4	6	1	2	4	6	1	2	1	2	4	4	0	0
Cottonseed, ton	2	2	2	1	1	2	2	2	1	1	2	2	1	1	1	1	2	2	1	1
Grain sorghums, bu.	18	18	20	14	14	11	17	17	13	13	12	13	8	9	14	14	11	11	8	8
Oats, bu.	32	31	66				20	20				1								
Tung nuts, ton		0.04	0.05					0.04									0.01	0.04		
Honey, extracted, lb.		36						30				36								
comb, lb.		0.1																		
Mohair, lb.		6						6				6								
Turkeys, lb.																				
Sweet potatoes, bu.			0.2																	
Soybeans, bu.	4	13	20			5	4	13			4	13					5	5		
Turpentine, gal.	20	20	14	15	15	8	18	18	14	14	9	10	5	6	15	15	8	8	5	5
Rosin, cwt.	0.5	0.1	0.4				0.4	0.1			0							0		
Dry peas, edible, cwt.	0.03	0.04	0.22	0.03	0.04	0.03	0.03	0.04	0.03	0.04	0.03	0.04	0.03	0.04	0.03	0.04	0.03	0.03	0.03	0.03

effective and transitional parities and with full Brannan prices. Barley and oats would have been supported only under maximum payments and effective or transitional support standards. Support would have been necessary for tung nuts, honey, and mohair only under a few plans. Rosin would not have required extensive support. Diversion would have been required under all or nearly all plans for the following products: corn, peanuts, rice, wheat, milk, potatoes, dry edible beans, flaxseed, cottonseed, grain sorghums, turpentine, and dry edible peas. In most of the commodities for which total first costs would have been relatively high under most of the plans, diversion would have exceeded a minimum of 10 per cent of estimated sales without support operations. For the feed grains, however, diversion as a percentage of available supply is lower. Both the cost and diversion estimates reflect the upsurge in farm prices which occurred in the latter part of the support period. For this reason, use of data for the 1948 year might yield more useful conclusions with respect to the relative costs of these plans in years when differences between support prices and market prices are high. As the difference between estimated market price and support price widens, costs under the 1949 statute increase relative to those involved in the other programs.

The costs by commodities under the twenty plans could be calculated by applying the appropriate support prices to the diverted quantities indicated in Table 5. The dominance of corn, wheat, milk, potatoes, and cottonseed as cost items is clear. The differential impact of the various programs upon the commodities is also indicated. It is also clear that several commodities which do not individually rank high as cost items would nonetheless require support under all or most of the programs. Among these are peanuts and rice in the basic category and milk, dry edible beans, flaxseed, grain sorghums, and turpentine. Thus, while there are significant differences in costs and distribution thereof resulting from differences in parity standards and in support percentages, by far the bulk of support costs are concentrated in a few products. Major adjustments appear to be indicated for grains and milk. Eggs and potatoes appear also to be oversupported. Other out-of-line commodities do not appear to be sources of significant costs.

IV. *Summary*

Methods and results may be summarized briefly. Total first costs are the additions to farm cash receipts from price support. With direct payments, the full immediate burden falls upon government. With diversion, total first costs consist of added outlay by users plus costs of stock acquisition by government and are equal to total first costs with diversion. One variable must be approximated to calculate differences in costs; two variables to calculate magnitude of costs; and two variables and one regression for distribution of costs.

Several major limitations are attributable to the restricted definition of the questions engaged, to the necessity to accept judgment of specialists with respect to fundamental data and relationships, and to the restricted time period over which costs are measured. The applicability of the results to policy questions is accordingly limited. The definition of first costs used here precludes analysis of many important issues. There are obvious uncertainties with respect to the market prices and utilization in 1949, to the demand equations, and to the elasticity estimates upon which they are based. Implicit inclusion of the peculiarities of 1949 production and demand patterns, and therefore of all their determinants, has been noted. The difficulties associated with intraseasonal adjustments of production, demand, and price for related goods have also been set out. In the face of these limitations, the analysis was restricted to a single year in order to reduce the questions at issue to workable scope, to reduce the number and complexity of required assumptions, and to avoid complex methodology upon which irresoluble argument might center. Error in estimation of commercial utilization—given supply and utilization patterns—should not be fatal. A pivot point on the 1949 regressions is given and, therefore, determinants of level of demand need not be investigated. Intraseasonal changes in demands consequent upon changes in support price should not be serious for most of the commodities considered here. Neither the full supply function nor temporal shifts in its form or level need be known. Changes over time in variables or their magnitudes, in functions, or in equilibrium and stability conditions need be considered only if a net cost estimate is sought.

Projection of costs to different contexts, which would greatly extend the usefulness of these results, would involve far more complex procedure and a wider range of assumptions. By specifying the factors affecting production, factor-costs, and demand functions and by further specifying the form of relations among them, cost levels could be approximated for any period in which such specifications were replicated in the economy. Projections purporting to indicate actual future magnitudes are limited by several strictures: the operational necessity that some models include too few or too broadly aggregated variables; omitted variables may exert significant aggregate effect; limitations upon calculation may require postulation of too simple forms of relationships; there may be inadequate bases for selection among competing hypotheses in the formulation of the models. These observations do not disparage the desirability or feasibility of formulating projections. Rather, they indicate that the number and complexity of assumptions and calculations exceed the limits of this study. Therefore, the relative simplicity in assumptions and manipulations here must be set against the greater generality which could be obtained through projection over time. The cost estimates here can at most provide approximate description of immediately past experience and offer restricted possibilities for short-run extrapolation.

Some limited projection of costs is implicit in the present study. Both transitional and modernized parity imply the passage of time without change in the determinants of price support. However, Brannan support standards should rise over time relative to modernized parity prices under the two statutes. Introduction of new parities should compound this change in relative parity and support levels. After 1954, mandatory minimum levels of support would decline. With the same values for cash receipts, indices of prices paid, and of prices received, the level of price adjustments required by the Brannan proposal would exceed that required under the 1948 statute.

Further, several generalizations with respect to the relative effects over time both of method and of cost of support may be adduced a priori. With diversion, it is probable that costs at processing or retailing levels are greater than at the farm level since margins appear to widen as farm prices rise. The competitive position of supported products may weaken if substitutes are available. Thus, part of the benefits of price support may be diffused to producers of competing products. Diversion may adversely affect regular producers in secondary channels if attempts are made to recover some part of costs to government by this means. Maintenance of the same price level through payments rather than diversion would probably involve less decrease in real income, since individual users could reach equilibrium adjustments at higher preference levels with direct payments. Both price and income effects—usually supplementary—appear to be involved in diversion while a single income effect is consequent upon payments. There is some possibility that demands for supported products may fall if stocks are accumulated over long periods and hang over commercial markets. All of these likely repercussions would tend to raise the final costs of diversion relative to maintenance of the same price level through payments. In addition, incidence of costs should fall more heavily upon low-income groups, since approximately one-third of all costs appear to impinge upon users. However, distribution of stocks may subsidize low-income users. On some commodities, both costs and benefits may be diffused into export markets. Carry-over of stocks does not unequivocally assure higher average annual farm receipts, and diversion operations are not primarily oriented to these objectives There should be little if any difference between diversion and payments in generating supply response, although payments may involve lesser response in substitute products. Thus, there should be no significant differences in the scope or nature of controls required. Allotment and enforcement difficulties should not differ greatly. There appear to be major differences in administrative procedures and expenses. Sale of abnormally large volume of such products as the feed grains, collusion in reporting sales, and multiplicity of small sales might impede effective administration of direct payments. There is no need that payments be made direct to producers by government instead of through some handling or processing bottleneck.

There is, however, no unequivocal case for payments as preferable to diversion in all cases or by all criteria. There is no need that these methods be considered mutually exclusive or hostile procedures. With respect to cost to government, the balance appears to favor diversion for storable commodities. There is no indication that on-farm elasticity for groups of closely related products exceeds unity. If only one commodity out of a group of closely substitutable products were in redundant supply, direct payments would be indicated as less costly to government. Especially in the feed grains, price support through diversion induces storage when crops are large. With direct payments such large crops would probably move into utilization with subsequent heavy production—and support—on livestock. In short, crops there would be neither inducement nor mechanism to obtain return of support outlays which had been made in long crop years. Thus in feed grains particularly, diversion should decrease costs to government and offer the prospect of no net losses to government over the long run. Acquired stocks may have either positive or negative net value to government over the long run. In fact, long-run money costs have been negligible on storable commodities. Apparently production of cotton, tobacco, and wheat can be controlled fairly effectively through marketing quotas. Corn production in the commercial area can at least be strongly influenced by acreage allotments. Magnitude of stocks is thus subject to some control. Drought or war or other emergencies may enhance the value of stocks. The effects of stocks upon demand levels at least over the relatively short liquidation period has not been effectively appraised. Even so, it appears unreasonable to depend upon such situations for liquidation of stocks, since acquisition is not systematically related to the likelihood of their occurrence. In short, there is a strong case for diversion in storables which are used in raw materials for production of other commodities which may be eligible for support. This case, however, rests only upon minimization of costs to government. Judged by total costs and by impact on users, no such case can be supported.

Aside from repercussions associated with alternative methods of achieving a given level of support, a series of conclusions may be posited with respect to the impact of levels of cost alone. Any method of support which significantly raises net cash receipts above the level which would prevail in the absence of widespread support and control will ordinarily induce further expansion of output. The stability of individual enterprise adjustment will be inversely related to the difference between support price and market price. The scope and stringency of control will vary directly with levels of cost. The necessity for allotment and ease of administration will also be related to cost. Any method of price support involves unequivocal income transfer through monopoly organization, with rather less obvious dumping when direct payments are used. There appears to be no reason to conclude that the determinants of level, stability, or distribution of earned incomes in agriculture are directly touched by price support. In fact, the greater is the difference between support incomes and market income, the more effective and enduring should be the impediments created against the productivity and mobility adjustments which seem to underlie the problems of low and unstable earned incomes. When full or near-full employment exists in the economy, support high enough drastically to shift production patterns appears actually to worsen the maladjustments towards which support is nominally addressed.

Thus, the balance of evidence with respect to method of support indicates that direct payments should involve lower net costs than would diversion for those commodities on which on-farm elasticity is relatively high and the storage or processing of which is costly. By this criterion, the Brannan proposal appears to be the least undesirable of the three plans considered. For storable commodities, there is no such compelling conclusion in favor of payments. With low on-farm elasticities for supported goods used as raw materials for other supported products and uncertainty with respect to future production, commercial demand, and noneconomic contingencies, a reasonable basis for diversion and storage exists. There is nothing in any of the three plans which should preclude such storage—which can be supported by lesser short-run costs to government and in some cases the possibility of lesser net costs.

The higher is the level of support above market magnitudes at near-full employment, the greater is future cost and the less easy become the productivity and mobility adjustments needed for the solution of the fundamental problems of undesirable disparity, instability, and distribution of earned farm incomes relative to those earned in other sectors of the economy. In the short run, the Brannan Plan appears to be least undesirable by this criterion. Given time for effectuation of new

DISCUSSION

John D. Black: Because Professor Mehren has gone far beyond comparing the costs of the two programs actually enacted into law and the one proposed by the Administration and estimates the costs of twenty alternative combinations and variants of these, it becomes highly necessary first of all to abstract from his analysis the three that we have been much concerned with until recently. We can then consider any likely variants of these.

Before I do this, however, I want to pay my high respects to Professor Mehren for the care and thoroughness with which he has performed his task. His is the kind of painstaking, scientific analysis we are always looking for and do not often find. There are few qualifications of his results that need to be made that he has not recognized in his paper.

For the Hope-Aiken Act of 1948, what we want to know is what it would have cost with the new parities and its flexible provisions in full operation. Professor Mehren carefully avoids the term flexible, but his minimum costs are the costs with the flexible provisions in full operation. The new parities would not, of course, have been in full, or practically full, operation until perhaps 1952. Supplies of the mandatory products would have increased by this time, or by 1955-56, assuming normal crop weather and demand, to the minimum levels or at least part way to them. From the standpoint of costs, the effects would be the same either way. If they did not go full way, there would be no costs involved, for this would mean that prices and supplies had come into equilibrium at this level. Professor Schultz and I both made statements back in 1948-49 that we expected that an equilibrium level for farm prices in general would average out around 80 to 85 per cent of parity. The effective minima in the Act of 1948 mostly ranged from 72 to 80 per cent of parity, with wool and potatoes, however, down to 60 per cent. The prices of some of the individual products would, of course, have fallen below the minimum level without resort to diversion. Or it was possible under the Act of 1948 to let the price fall and make up the difference between the support level and market price by direct payments to producers. In either case, costs would have been involved that are not included in Professor Mehren's estimates.

Professor Mehren's total cost estimate that comes nearest to fitting the foregoing specifications is his 285 million dollars for new parity and minimum price supports. This estimate would not fit to the extent that carry-overs and sales in the year that the Act of 1948 went into full effect were different from those in 1949 and that larger or smaller diversion losses or gains or direct payments would in consequence be involved.

The Mehren cost estimate for the Act of 1949 nearest comparable to the 285 for the 1948 Act is the 566 million dollars. Since the minima under this Act was mostly higher than for the 1948 Act, ranging from 2 per cent higher for wheat to 5 per cent for cotton and corn and 15 per cent higher for rice, the resort to diversion comes much sooner and is much more expensive.

Actual experience with the 1949 Act in 1950 has been of course no clear test of how it will work out after the new parities and flexible provisions come into operation. It has indicated, however, that the kinds of surpluses that will surely arise under it in spite of somewhat lower support levels than at present, will create some very difficult problems, which the present Administration has not succeeded in handling at all effectively. It may well have done the best that could be done under the circumstances, but I am by no means sure of this.

	Act of 1948 New Parity and Flexible Provisions	Act of 1949 New Parity and Flexible Provision	Brannan Plan Prices 1.27×Average Annual Price, 1938–47
Corn (bu.)	1.11*	1.19*	1.39*
Cotton (lb.)	.217*	.2561*	.2604*
Peanuts (lb.)	.105*	.105*	.0871*
Rice (bu.)	1.52*	1.94*	2.11*
Wheat (bu.)	1.63*	1.66*	1.74*
Tobacco—flue-cured (lb.)	.425*	.442*	.462*
Tobacco—burley (lb.)	.418	.442*	.468*
Potatoes (bu.)	1.10*	1.10*	1.51*
Wool (lb.)	.295*	.312*	.483
Whole milk (mfg.) (lb.)	.0321	.0334*	.0397
Butterfat (lb.)	.508	.534*	.631
Tung nuts (ton)	60.00	63.00*	100.87
Honey extracted, (lb.)	—†	.106*	.163
Mohair (lb.)	—†	.440*	.682
Eggs (doz.)	.350	.42	.431*
Farm chickens (lb.)	.226	.271	.277*
Hogs Mar.–Sept. (lb.)	.1438	—†	.1780
Beef cattle (cwt.)	—†	—†	15.80
Lambs (cwt.)	—†	—†	17.00
Barley (bu.)	.726	.76	1.16
Flaxseed (bu.)	3.28	3.47	4.07
Cottonseed (ton)	50.88	53.88	64.50
Grain sorghum (bu.)	1.37	1.44	2.24
Oats (bu.)	.482	.51	.787
Soybeans (bu.)	1.89	2.01	2.40
Dry beans (cwt.)	5.51	5.82	8.01
Honeycomb (lb.)	—	.188	.277
Turkey (lb.)	.277	.295	.342
Sweet potatoes (bu.)	1.50	1.58	2.15
Turpentine (gal.)	.52	.55	.740
Rosin (cwt.)	4.35	4.61	6.19
Peas, dry, edible (cwt.)	3.31	3.49	5.46

* Mandatory support at this level under the Acts, or under Brannan Plan as presented by Secretary Brannan.

† Support price not given in Tables 15 and 16 because lower than prevailing 1949 price.

What I expected to do when I started this review of Professor Mehren's analysis was to select from it a figure for the Brannan Plan as comparable as possible with the 285 and 566 million dollars for the Act of 1948 and

1949, respectively. This would be an estimate of what carrying out the Brannan Plan would cost when it was in full operation, say, in 1952-55.

I found upon close reading of the Brannan statement of April, 1947, and Professor Mehren's paper that I was not at all sure that any of his estimates really fits such a description. Accordingly what I have done instead is to put together in the accompanying table Professor Mehren's estimates of what prices would have been under the Acts of 1948 and 1949 and what they would have been at the full Brannan support level; that is, 1.27 times the average annual prices of the different products in 1938-47. It will be remembered that the Brannan proposal was to use a ten-year moving average with a two-year lag.[1] It will be noted that the Brannan standard levels are higher than the 1948 Act prices on all the products except peanuts. From these prices and Professor Mehren's "total sales", in his Table 1, I have made calculations of costs with the Brannan Plan in full effect, under three assumptions as to how the Brannan Plan might have been carried out, as follows:

1. Full Brannan support prices for all the products in the table, whether mandatory or not, at the 1949 levels of production, as assumed by Professor Mehren in all his calculations. The total costs under these assumptions would have been 2,625 millions dollars higher than for the Act of 1948 as above figured, or a total of 2,910 millions. With a normal cotton crop in 1949, nearly another hundred million would have been added to this cost, making the final figure roughly 3,000 millions.

Now to interpret this figure: It assumes, first of all, the same amount of crop control as in 1949. It should be obvious that if the prices in the Brannan column really were to be set and market quotas were not imposed, production of this full list of farm products would expand year after year. Within five years the general level of output might be up as much as a fifth. We expanded a third during the war. All we need is an assured market to expand at the same rate again. The Brannan Plan under these assumptions would presently be costing twice the 3,000 millions. Yet the Brannan Plan says that these are the prices that farmers ought to get. It opposes rigorously any flexible pricing arrangement such as provided in the Acts of 1948 and 1949 that would bring down the prices as output expands and hence tend to bring prices and production into balance somewhere below 90 per cent of new parity. Instead, the Brannan proposal is to put the product on the market, let the market price fall to whatever level will move the products, and make up the difference in direct payments. Actually carried out on this basis, the costs would indeed be as much as the 5 or 6 billion dollars that have been estimated by many.

2. The actual Brannan proposal, however, had another important feature. It included use of market quotas on the basic six commodities and some others when the output became too great. To the extent which these were used and were effective they would hold up market prices and reduce the size of the direct payments. Indeed, the quotas could be reduced to a level that would call for no direct payments at all—provided they could be enforced

---

[1] The prices in this table are from Professor Mehren's full report, those for Brannan full-support from his Table 2 in the full report, and those for the two other columns from his Table 2 so far as possible and the rest from his Tables 15 and 16.

at these levels. It is impossible to estimate the cost of the Brannan Plan with marketing quotas in use unless one makes some assumptions as to the size of marketing quotas set and as to their enforceability.

Any actual use of the Brannan Plan would have called for some working compromise between market quotas and direct payments in the Group I or mandatory products in the Brannan Plan. The workability of marketing quotas surely would have been a major determinant. Without any quotas, the cost of full Brannan support levels even at 1949 levels of production would have been around a billion dollars for the basic six commodities. Let us assume that the compromise would have been quotas that would have resulted in prices and costs half way to this level, or a half-billion dollars.

Marketing quotas would have been very difficult to enforce on potatoes, on eggs, and on farm chickens—all in the Brannan mandatory list. Brannan support prices times sales in 1949 would have called for direct payments and/or diversion costs on these three products alone, totaling around 800 million dollars more than these would have cost at 1948 Act support levels. Given assurance of these high returns for these products, surely the producers of them would have expanded their output much more! Certainly some level of support prices below the full Brannan level would have been necessary to have made it work at all for these three products. Let us accept as the compromise a level of prices that would have cost a half billion dollars.

3. As for the products in Professor Mehren's table not in the Brannan mandatory lists—twenty-two of them—no definite commitment was made in Brannan's statement as to the level at which their prices would be supported. Support at the full Brannan support level would have meant direct payment or diversion costs totaling around a billion dollars. In one of the Mehren estimates, support prices have been assumed at the actual support levels of 1949. If it is reasonable to assume that the Brannan Plan in actual administration, in spite of its pronouncements as to the need for prices at levels well above the Hope-Aiken levels, would have accepted something like the actual 1949 support levels for these twenty-two commodities, then the billion dollars of cost for the twenty-two commodities would have been reduced, according to Professor Mehren's estimates, by 510 million dollars (the difference between the 2,009 millions and 1,499 millions in Table 23 in the full report).

Some part of this could be saved by imposing marketing quotas on a few in the list of twenty-two for which such quotas might be enforceable. These include oats, barley, soybeans, dry beans, grain sorghum, and flaxseed. The possible savings with quotas substituted in full for direct payments for these six products would be around 400 million dollars out of the billion. Let us assume, as we did for the basic six, that a compromise between Brannan Plan prices and marketing quotas at half this cost is reasonable; namely, 200 million dollars.

But there is still left in the twenty-two products a number of important ones for which quotas would be extremely difficult; namely, whole milk, butterfat, wool, and turkeys. Full Brannan Plan support for these would cost 600 million dollars more than the Act of 1948 prices. Let us assume that in actual practice the Department of Agriculture would have set price levels that would have cost half the 600 million.

Accepting these compromise figures, one comes out with a total of around a half billion for the twenty-two commodities, which is about what the Mehren estimates come to under his assumptions.

Let us now put together the three "compromise" sets of estimates: first, the 500 million dollars for the six basic crops; second, the 500 millions for three other mandatory products, potatoes, eggs, and farm chickens; third, the 500 millions for the twenty-two nonmandatory products.

The total of 1,500 million dollars is the same as the 1,499 millions arrived at by Professor Mehren by one of his methods, except that this 1,500 millions as figured here is in addition to the 285 million cost of the Act of 1948, making a total of around 1,800 millions.

But it cannot be stressed too strongly that this amount spent on direct payments and diversion would not have given prices at the Brannan Plan level. Instead they would have averaged down around the 90 per cent of parity level, below it for most of the nonmandatory products.

Some of the high costs in the above estimates are surely in part a heritage from preceding programs that built up surpluses; but these would be more than offset by the expanded production induced by the large direct payments on products whose output is difficult to restrict by any enforcement measures. The foregoing estimates do not allow for the expanded output certain for many of these products by 1952-55 in spite of all possible reasonable use of marketing quotas. Most important of all, no costs of any kind for hogs, beef cattle, and lambs are included in these estimates, because prices of all were above even the Act of 1949 levels in 1949, and with market quotas imposed on other commodities as above assumed, hogs certainly, and probably beef, would be requiring support within a few years. It is highly probable that the Brannan Plan administered with moderation would be costing well on toward 3,000 million dollars by 1952-55. This is as near to an estimate of the cost of the Brannan Plan in full operation, comparable with the 285 millions for the Act of 1948 and with the 566 for the Act of 1949, both in full operation, as one can come to from Professor Mehren's analysis. This is fully ten times the cost of the Act of 1948.

The foregoing cost estimates are of course all in terms of Professor Mehren's "total" costs. In general, his estimates are to the effect that around 30 per cent of the total costs could be shifted to users if diversion rather than direct payments were the major device used.

One cannot safely assume, however, that this 30 per cent would all be saved by the government. If experience of the past two years is a guide, the government would so nearly give away a large part of what it purchased that only a fraction of the 30 per cent would be saved. If low-income consumers in this country got the benefit of this giving away, one might not object to it. Instead a large fraction of it has been shipped overseas, and by no means all of it has been used in human consumption—potatoes, for example.

One further comment on Professor Mehren's cost estimates is in order;

namely, that probably all of them are on the conservative side. If Congress ever appropriated enough money to implement them, they might run as much as a third higher. One reason they are low in the one just named is that they do not include all the losses on the diversions outside the usual channels of trade. These could be very high if production shifted strongly to livestock products, making a vigorous surplus disposal program for these necessary. A further reason that the Brannan estimates are low is that the moving-average clause would raise the support levels each year till about 1956; that is, until the adjusted cash receipts for the year added were less than those of the year dropped, plus two years for the two-year lag proposed.

As Professor Mehren fully recognizes in his paper, the relative cost of agricultural programs is only one attribute of them. Of much more consequence is what is achieved with the money spent. A million dollars spent in such a way that it adjusts production and consumption so that presently no supports are needed is worth 10 millions that merely perpetuates the maladjustments. The production changes that would have been induced by the Act of 1948 would nearly all have been in the right direction. The quotas that probably would have been imposed on corn—and probably on some other feed crops—would have tended to shift land to grass and forage crops and dairy and beef production. This would have increased dairy production and called for still larger diversions. But Senator Aiken had plans to deal with this situation when it arose; namely, to attempt to obtain enactment of legislation along the lines of his National Food Allotment Plan. He saw no purpose of pushing for this in 1948.

It should be apparent that the Act of 1948 was a pretty good start in the direction of a reasonable balanced production-consumption adjustment program—such a one, for example, as outlined in Chapter 21 of Black and Kiefer's *Future Food and Agriculture Policy*. The costs would have been low and the adjustments under it would have been mainly in the right direction. The next steps needed were outlined in my testimony before the Anderson subcommittee of the Senate Committee on Agriculture and Forestry in the next session of Congress. They were: (1) Revising the schedule of percentages in the flexible provisions to fit the particular supply-price function of each commodity, and also the harvesting costs, so that an output above normal would yield approximately, and preferably somewhat less than, a normal output, so that the producers would not be under inducement to keep overproducing. (2) Putting all the mandatory commodities, particularly tobacco, on this basis. (3) Making a start in needed consumption adjustment by expanding the school feeding program and trying out the food allotment program with a few population groups in sample areas.

Further than this, I strongly urged the Secretary of Agriculture to set his economists to working out comparable schedules to use with additional commodities, so that the Department would be in position to put these on a similar basis as they came under pressure. I pointed out that this would likely result in Congress being willing to leave programs for these to the discretion of the USDA, which would be desirable.

From the standpoint of progress in developing a workable agricultural program for the country, the outcome of the 1948 election was particularly unfortunate. The Southern and some other groups were put in position by it to reverse the desirable trends in the 1948 program. The Act of 1949 would have raised the total costs according to Professor Mehren's estimates, and most of the mandatory commodities would have come into surplus at a higher level of prices, thus creating a much larger task of output control and surplus disposal. The production shifts under the inducements of the 1949 Act would still be in main in the right direction, but clearly less so than under the Act of 1948. The one advance in the 1949 Act was the beginning of a differentiation of programs to fit better the different products.

If one leaves out of the Brannan Plan his moving-average so-called "income-support" standard, using the 1948 Act parities instead, and adds to it a soundly constructed flexible-pricing arrangement, so that nothing is left of the Brannan proposal except letting the market set actual prices and paying the difference as direct payments, and/or combining with the foregoing a diversion program for selected products like dairy products and eggs, then indeed we would have a program worth trying. I am satisfied that it would work far better than anything we have had yet. The cost of such a program would be something like the 248 million dollars estimated by Professor Mehren for the Brannan Plan with 1948 Act parities and minimum prices. But the program so revised would be in effect a revised 1948 Act program, with much freer use of direct payments than proposed in that Act. Such payments were only optional in that Act.

It is of course now obvious that the USDA has actually been using flexible pricing in the past two years. It has been forced by circumstances and by the limits of CCC appropriations to lower its price supports according to supply. All that is needed is to extend this actual practice to the mandatory commodities and we shall have in effect pretty much what the Act of 1948 set out to do. But this is not enough. The Act of 1948 needed the improvements herein outlined. What is mainly needed to give us a sound program of what is now called price supports—and what was called Agricultural Adjustment in the AAA Act of 1933—is to step up consumption adjustment a good deal and reduce acreage and marketing quotas to use only in extreme emergency situations.

One basic idea of the Brannan Plan is to limit the output of crops for the cash market by marketing quotas, thus forcing a large acreage into forage and feed crops, and thus stepping up the output of foods of livestock origin. This would mean that one part of our farmers would be subsidized indefinitely in the production of a restricted output of crops for the cash market. These farmers would have a perfect government supported monopoly of this much production, with a large part of our agriculture frozen in place with little chance for needed adjustments. As livestock output went up, the prices of it would go down, and the government would have larger and larger direct payments to make, or diversion costs. What these might cost within ten years can scarcely be conceived. Much more rational would be a program that shifted production from cash crops to livestock products as fast as consumption of these latter could be built up by a vigorous program as consumption adjustment. The Brannan approach puts the cart before the horse.

It thus develops that we do come out of a careful interpretation of Professor Mehren's analysis with some results that have an important bearing on the immediate situation. These make us realize that one of the few real compensations in this situation is that we are now in position to drop out all or virtually all of the acreage and marketing quotas and let demand and price determine the supply of farm products. If additional surplus of certain products is needed, an intelligent use of incentive payments will suffice. Postmobilization or postwar price guarantees should be made only in case the shifts now needed are in the direction opposite from what will later be advantageous to the economy; and they should be restricted rigorously to such production. If we can operate on this basis, we shall come out of it at the end of mobilization with our agriculture freed of most of its present fetters; and let us hope it can be kept free of them thereafter. And may I add that this represents no change in position on my part since I wrote *Agricultural Reform in the United States* in 1929. There will come a time toward the end of mobilization or war when we shall need to begin planning readjustments in production, but let us not at that time be handicapped in our efforts by the relics of any historical bases.

WILLARD W. COCHRANE: This is an excellent paper; it should serve as a model inquiry into the costs of income supporting programs for some time to come. The question is posed early and clearly. The theoretical framework is unpretentious but nonetheless incisive. Limiting the period of analysis to one year turns out to be a neat device. By this methodological device a bottomless pit of investigation is avoided and the number of relationships which must be tracked down is reduced to manageable proportions. In short, the use of theory to guide the empirical inquiry and the use of common sense to limit the area of empirical investigation are brought together in a happy combination.

As to the results obtained in terms of first costs—I can only say they appear reasonable. The estimated first costs of 2.062 billion dollars for the Brannan Plan with maximum payments as of 1949 is in line with other estimates I have seen. This may, however, represent only an intercorrelation of experts, since the source of the raw material was in each case the BAE. Still a figure of 2 billion dollars in 1949 running up to around 3 billion by 1954 would seem to be well on the way to becoming a generally accepted range of first costs (or payment costs) for the Brannan Plan.

It is interesting to observe that first costs in the Mehren system are made a function of the level of price support regardless of the mechanics of the plan where the patterns of price support are identical. In other words, we may compare the first costs of different type plans for any year by comparing indices of the level of price support under the different plans so long as the patterns of support are identical. And the patterns of price support were moving toward the average pattern of the most recent ten years in each of the plans under comparison. Assuming, then, that each plan employs the most recent ten years as the pattern of price support, first-costs of the plans may be compared simply and directly by comparing the index values of the level of price support for each of the plans.

Professor Mehren has requested that the discussants discuss policy; so that is what I am going to do in the remainder of my time. But I, too, wish to make use of the analytical strategy of a one-year period. In the context of one year I want to compare a diversion program with a direct payment program (following the definitions used by Professor Mehren).

Since in my analysis we are not comparing the Brannan Plan with the Act of 1949 but rather a diversion program with a payment program, let us assume that the level and pattern of price support are identical under the two programs. We eliminate one irrelevant and troublesome variable by this procedure. It then follows by the Mehren analysis that total first costs are identical under the two types of programs. In either case total first costs are equal to quantity times the difference between support price and market price or $Q_m (P_1 - P_m)$.

My next proposition is that resources on farms would be used similarly if not identically for the year in question under the two types of programs. Given the diversion program, resources would be allocated in response to market prices where those prices exceed supports; otherwise by the level and pattern of price support. Given the direct payment program, resources would be allocated in response to market prices for the same commodities as above; otherwise by total prices where each total price is compounded of market price and income payment. Total price for any commodity is, of course, equal to its defined price support, and since the level and pattern of price support is assumed to be identical under the two plans, it is reasonable to conclude that resource allocation would be equally good or bad under the two plans.

I assert, to save time and space, that there is no reason to believe that administrative costs would be greater under one type of program than the other.

Therefore, in the context of one year and by the criteria of welfare considerations, I conclude that the payment type program is superior to the diversion type. Total money costs of farm commodities acquired are equal via either route. But by the payment route the total output of agriculture may be moved into consumption for the year in question; whereas by the diversion route total output less that amount diverted may be moved into consumption for the year in question. The point is a simple one; money costs are equal, but more food and fiber products are available to consumers through the operation of the payments program than by the diversion program. Hence, by strict welfare criteria, only one conclusion is possible: the payment program is superior to the diversion program for the year in question. The measure of superiority is equal to the volume of commodities diverted—in Mehren's terminology to $Q_m - Q_1$.

We have an objective measure of the superiority of one plan over the other. But is the story complete? Hardly. There are certain obvious and noneconomic bases of personal preference which come to bear on this policy problem. I do not know how to incorporate these personal value judgments into the above economic analysis, but they do find their way into the political processes where farm price policy is formulated. Hence we had better recognize them.

Let us look briefly at two of these noneconomic bases of a personal preference for the diversion type program. First, it is generally observed that farmers do not want to receive their income subsidy in the form of a government check. They want to receive their subsidy in the prices received by them where that subsidy is less obvious. Second, Congressmen reflecting the views of their constituents are desirous of keeping taxes from rising. Hence are desirous of holding down governmental expenditures. In brief, a widespread preference may be said to exist for reducing the costs of government in the administration of agricultural programs. In my opinion (and I am entitled to an opinion, since the force of opinion is what we are discussing) the first of these personal values is exaggerated and is subject to immediate collapse if and when a payment program comes into operation. But the second preference pattern is real indeed—and may override all other considerations.

But there are noneconomic bases for a preference in favor of the payment type program, too. Where the social goal is the transfer of income from urban people to farm people, as is the case in both programs under consideration, many folks would prefer (including myself) that the effects of such a transfer be progressive rather than regressive. Now where the tax structure is highly progressive, as in the federal tax structure, the revenue collected under it to be transferred to agriculture as direct payments to producers would come primarily from the middle- and upper-income groups. On the other hand, if total first costs were defrayed by higher food and fiber prices, as would be the case with the diversion program, the incidence of costs would fall most heavily on low-income urban consumers. The increased food and fiber prices under the diversion type program might be likened to an excise tax falling equally in amount on all, but disproportionately heavily on the poor.

Thus, the low-income consumer finds that his income stretches further under the payment type program than under the diversion type. And we find a basis for favoring an income transfer from city to farm with progressive effects fully as compelling as the concept of income parity for agriculture.

We could discuss any number of other personal value judgments in favor of this program or that, but we shall not, for the time is short. Suffice it to say, my preconceptions with regard to social justice coincide with the objective determination of the superiority of the payment program. Thus, where the unit of time under consideration is restricted to one year and the alternatives are limited to the diversion and payment programs, I conclude that the advantage rests with the payment program. Now if we were to consider such longer-run items as changes in the value of stocks and storage costs, this conclusion might need to be modified. Still I believe the essential difference between diversion and payment programs as income support measures has been established in this one-year period; namely, so long as price support is mandatory, more food and fiber products are available for consumption via the payment program than with the diversion program.

I should like to close on a different note. This meeting reminds me somewhat of a group of doctors called in to discuss the case of a desperately sick man. But on arriving they found the patient fully recovered and out pitching hay. Not knowing what else to do, they proceeded to discuss his case. Now that consultation may have led to results useful in other situations, but not in the case in question. So with the farm income problem, the changing world scene has forced a reorientation of policy research in agriculture. The Chinese "volunteers" solved the farm income problem in the United States. Our problem henceforth, and for what duration I do not know, is that of marshaling our resources, which overnight became too few rather than too many, to produce enough of the things we must have to win a war of survival.

I believe we will discover in groping toward a solution to this new problem, as in the case of the older income problem, that the real difficulties lie outside the conventionally and narrowly defined limits of economics. If the war planners can spell out their food and fiber needs in a system of priorities, the allocation of resources to produce those kinds and quantities of commodities is largely mechanical. The key and crucial questions then are: (1) how will the decisions be made as to what and how much to produce and (2) will those decisions be politically acceptable? The creative thinking will take place with respect to the organization of institutions in which decisions may be arrived at with regard to what commodities and in what quantities and how to induce farmers to co-operate with those decisions.

AMERICAN ECONOMIC ASSOCIATION

PROCEEDINGS OF THE SIXTY-THIRD ANNUAL MEETING

CHICAGO, ILLINOIS
DECEMBER 27-30, 1950

PROCEEDINGS OF THE AMERICAN ECONOMIC ASSOCIATION

ANNUAL BUSINESS MEETING, DECEMBER 28, 1950
PALMER HOUSE, CHICAGO, ILLINOIS

The Sixty-third Annual Business Meeting of the American Economic Association was called to order at the Palmer House, Chicago, at 4:30 P.M., December 28, 1950. President Frank H. Knight presided. The meeting was well attended.

The minutes of last year's meeting, having been published in the *Proceedings*, were not read, nor were the minutes of the Executive Committee meetings held during the year. The latter minutes appear in the Secretary's Report.

After brief introductory remarks by President Knight, a summary of the Secretary's Report was presented by Professor J. W. Bell, who also reviewed the financial operations and condition of the Association. The Managing Editor of the *Review*, Professor Paul T. Homan, then described the work of the Editor and the Editorial Board. The work of the committees of the Association was commented upon by the President, who referred to their reports published in the *Proceedings*. Professor John V. Van Sickle, who attended the first conference of the International Economic Association at Monaco, September 10-13, 1950, as a delegate of the American Economic Association, presented an interesting account of those meetings.

Reports of the officers, of various committee activities, and of our representatives to the Councils and the National Bureau of Economic Research are printed in the *Proceedings* as follows: Reports of the Secretary (page 763); Treasurer (page 777); Finance Committee (page 781); Auditor (page 783); and Managing Editor (page 788). Reports of standing and special committees: Publications, F. A. Lutz, Chairman (page 791); Graduate Training in Economics, Howard R. Bowen, Chairman (page 792); and International Co-operation, the I.E.A., Gottfried Haberler, Chairman (page 796). Reports of Representatives: American Council of Learned Societies (see Secretary's Report, page 772); Social Science Research Council (page 798); National Bureau of Economic Research (page 800).

The report of the Election Committee and the certification of the election of new officers of the year 1951 were presented by the Secretary as follows:

In accordance with the bylaws on election procedure, I hereby certify the results of the recent balloting and present the reports of the Nominating Committee and the Committee on Elections.

The Nominating Committee, consisting of Calvin B. Hoover, Duke University, Chairman, Howard R. Bowen, University of Illinois, Carter Goodrich, Columbia University, Elizabeth E. Hoyt, Iowa State College, Alfred C. Neal, Federal Reserve Bank of Boston, and Jacob Viner, Princeton University, presented to the Secretary the list of nominees for the respective offices:

For President
John Henry Williams

For Vice-Presidents
Anne Bezanson
Corwin D. Edwards
Joseph John Spengler
Donald Holmes Wallace

For Executive Committee
Clarence Edwin Ayres
John Bell Condliffe
Albert Gailord Hart
Margaret G. Reid

The Committee on Elections (Walter A. Weisskopf, Roosevelt College, Chairman, Louis A. Keller, Lake Forest College, and James Washington Bell) prepared biographical sketches of the candidates and ballots were distributed early in November. The canvass of ballots was made on December 15, 1950, and the results were filed with the Secretary.

From the report of the Committee on Elections, I have the following information:

Number of envelopes without names for identification	1
Number received too late	60
Number of defective ballots	—
Number of legal ballots	2,611
Number of returns from the mail ballot	2,672

On the basis of the canvass of the votes cast, I certify that the following persons have been duly elected to the respective offices:

President (for a term of one year)
John Henry Williams
Vice-Presidents (for a term of one year)
Corwin D. Edwards
Donald Holmes Wallace
Members of the Executive Committee (for a term of three years)
John Bell Condliffe
Albert Gailord Hart

After this announcement, President Knight "signed off" with a felicitous gesture and introduced President-elect John H. Williams, who responded with appropriate remarks.

There being no further business before the meeting, President Williams called for the report of the Resolutions Committee, which follows:

WHEREAS, The members of the American Economic Association, meeting in the Sixty-third Annual Meeting, December 27-30, 1950, in Chicago, Illinois, desire to record their gratitude; therefore be it

Resolved, That the Association extends its sincere thanks to President Frank H. Knight, who carried the full responsibility for formulating the excellent program, to those who assisted him in the development of segments of the program, and to those who participated therein; and be it further

Resolved, That the Association extends its thanks to Professor James Washington Bell, efficient Secretary of the Association, and to his able and hard working staff; and be it further

Resolved, That the Association extends its thanks to the officers and members of the several associations concurrently meeting for the opportunity to share their interesting programs, an opportunity enhanced by the excellent joint printed program; and be it further

Resolved, That the Association extends its thanks to Mr. Charles G. Wright, of the Federal Reserve Bank of Chicago, and the very conscientious and capable members of his Committee on Local Arrangements, to the student volunteers of the University of Chicago, Northwestern University, and De Paul University, to the officials and staff of the Chicago Convention Bureau, as well as to the management and employees of the Palmer House for the excellent facilities and services provided for the members of the Association.

Henry L. Duncombe, Jr., *Chairman*
Robert W. French
Morris E. Garnsey

After the reading of this resolution the meeting was adjourned.

JAMES WASHINGTON BELL, *Secretary*

REPORT OF THE SECRETARY FOR THE YEAR 1950

The Secretary's Report is presented in two parts; namely, the Minutes of the Executive Committee meetings, which, together with the Minutes of the Business Meeting, provide a record of official acts and activities of the Association, and the Secretary's comments on the operations for the year.

MINUTES OF THE EXECUTIVE COMMITTEE

1. Minutes of the second meeting of the 1950 Executive Committee, Princeton, New Jersey, April 7-8, 1950:

The *second meeting* of the *1950 Executive Committee* was held April 7-8, 1950, at Princeton Inn, Princeton, New Jersey. The meeting was called after luncheon on Friday and adjourned Saturday afternoon. The following were present: President F. H. Knight, Secretary-Treasurer J. W. Bell, A. F. Burns, L. V. Chandler, R. A. Gordon, B. F. Haley, P. T. Homan, R. A. Lester, E. S. Mason, P. A. Samuelson, and Clair Wilcox. Absent were P. H. Douglas and H. S. Ellis. Attending as members of the Research Committee were R. B. Heflebower, S. E. Leland, A. C. Neal, J. J. Spengler, and G. W. Stocking and as members of the Nominating Committee H. R. Bowen, Carter Goodrich, E. E. Hoyt, C. B. Hoover, and Jacob Viner. The following guests were invited to attend the sessions: Committee Chairmen Gottfried Haberler (International Co-operation) and Horace Taylor (Teaching of Economics) and C. E. Odegaard (A.C.L.S.), Paul Webbink (S.S.R.C.), D. H. Wallace (N.B.E.R.), and Lionel Robbins (London School of Economics).

1. *Minutes.* The minutes of the December 27 and 30, 1949, meetings were presented in galley proof and were accepted with minor corrections.

2. *President's Remarks* (F. H. Knight). After introducing Professor Lionel Robbins, Charles E. Odegaard, and Paul Webbink, Professor Knight outlined briefly the topics in this session's agenda and called for reports of officers and committees. These reports were not given in the order of their appearance in these minutes but were shifted to accommodate Professors Haberler and Taylor, who were able to be present at the afternoon meeting only.

3. *Report of the Secretary* (J. W. Bell). Topics covered in this report were: membership growth and composition; size of printing; use of mailing list; information booklet; publication schedule, size, and probable cost of the *Papers and Proceedings* and also of the supplement to the 1948 *Directory*.

4. *Report of the Treasurer and the Finance Committee* (J. W. Bell). A brief summary was given of the financial condition of the Association, present cash balances, status of the investment holdings, financial results of the New York meeting, and later on a summary was added of the contingent liabilities now on our records.

5. *Report of the Managing Editor* (P. T. Homan). Dr. Homan reported that the volume of acceptable manuscript had been declining and that rejections were being made at an unusually high rate.

Expenses for moving the *American Economic Review* office to Los Angeles were discussed and it was VOTED that the Treasurer be authorized to meet Miss Doris Merriam's moving expenses to Los Angeles and the return trip as well if this proves to be necessary. Some expense of packing and moving files may also be incurred.

Attention was called to the desirability of including on the card of inquiry which the Managing Editor sends to department heads an item concerning prospective retirements of professors. It was urged that an initial list be compiled for the December *Review*.

Prompted by a request that the Association provide facilities for making known to the economic profession translations of Russian materials, sponsored by the American Council of Learned Societies, it was VOTED (*a*) that, through interested and informed members of our Association, we call to the attention of the A.C.L.S. translators and editors selected Russian documents for translation and that (*b*), through our Committee on Publications, we promote the republication or give appropriate publicity to items of especial interest to economists that appear fortnightly in the current A.C.L.S. *Russian Digest*.

6. *Reports of Standing Committees.*

6*a*) *Republications.* Professor B. F. Haley, retiring Chairman of this Committee, summarized the sales results of the four volumes already published and the status of the three volumes now under way.

During the meetings, President Knight announced the appointment of F. A. Lutz as Chairman and A. F. Burns as the third member of this Committee (J. W. Bell being the other incumbent). This Committee becomes, in effect, the Committee on Publications (see 6*b*).

6*b*) *Research* (S. E. Leland). On recommendation of this Committee, it was VOTED to channel the publication of (*a*) the republication volumes, (*b*) the second *Survey of Contemporary Economics* volume, and (*c*) the translation series under the direction of one committee, which shall be known as the Committee on Publications.

The publication of translations of foreign classics has proceeded only so far as to explore the possibilities of negotiating with Macmillan, London, to enter into an arrangement of joint sponsorship with our Association and an American publisher (with possibly joint sponsorship by the Royal Economic Society or the London School of Economics) in issuing Professor William Jaffe's translation of Léon Walras' *Elements*. The Secretary has been authorized to proceed with negotiations.

The Committee received a request from Dean Blair Stewart concerning the translation of Sombart's *Modern Capitalism*. The Committee does not recommend action. Reference was made to an Italian condensation of Sombart in one volume; also to the rumor that about a thousand pages of *Modern Capitalism* have already been translated and are in manuscript.

The Committee does not recommend translation of Stackelberg's works (as it is alleged that most of Stackelberg's contributions are available in others' writings) nor is the Committee ready to pass on Heckscher's *Economic History of Sweden*.

Attention was called to the S.S.R.C. research project on economic behavior. It is believed that research organized on an interdisciplinary basis will prove useful if done on an appropriate scale and if it is well financed.

The Committee reports that Professor Haley is making satisfactory progress on the second *Survey of Contemporary Economics*.

No funds have yet been obtained from foundations to underwrite the *Survey* or the translation series. However, the Committee does not at this time ask for A.E.A. funds.

The Committee has found no lists of economic foundations, research committees, etc. (nor record of funds spent on economic research), not readily available in Rich's *Foundations*, Harrison and Andrews, *American Foundations in the Social Sciences*, etc.

6*c*) *Teaching of Economics and the Training of Economists* (Horace Taylor). After reviewing the history of the activities of this Committee, Professor Taylor summarized the recommendations made at the December meeting, reminding the group that the publication of their report was authorized at that time and reporting that with the exception of four reports not yet complete the volume is taking form and will probably be ready for publication as a supplement to the September number of the *A.E.R.* In checking deadlines, the timing was changed to the December number. The volume will contain some 180 to 200 pages and will cost an estimated $3,000 or $4,000. Since the Committee has about $200 unspent of the $800 appropriated, this leaves a large contingent obligation to be met.

The remaining four items of the Committee's recommendations were discussed and the following action taken:

Item 2.—VOTED to postpone action on establishing a permanent or standing committee on education in economics.

Item 3.—VOTED to establish an exploratory committee of three on graduate training in economics with broad terms of reference; namely, the need for such a study, subjects which should be investigated, activities and plans of other groups engaged in such studies, costs and financial sources of assistance for such a study. It is expected that this committee will be ready to report at the annual meeting in December, 1950. Clerical and travel expenses for one meeting were authorized up to the amount of $250. Dean Howard R. Bowen has accepted the chairmanship of this committee and is to suggest other members for appointment.

Items 4 and 5.—No action taken.

6*d*) *Public Issues* (S. H. Slichter). In the absence of Professor Slichter, Donald H. Wallace reported that the Committee now presses its recommendation that the statement prepared by the Subcommittee on Economic Stability be published and circulated. Since the December meeting, copies of the statement had been sent to all members of the Executive Committee and copies of an explanatory covering letter were passed around to members present.

It was VOTED to accept the report and to authorize its publicaton in the *American Economic Review*, with explanatory material. The Committee on Public Issues was authorized to prepare 2,000 reprints and to circulate them to interested parties, the preparation involving cover design, title page, and publicity statement. If the unexpended balance of the subcommittees' appropriation proves insufficient to cover costs, an additional authorization of $200 was approved to finance the project.

No report was received from the second subcommittee (on international economic problems).

6e) *International Economic Association* (Gottfried Haberler). Professor Haberler, just returned from a meeting of the preparatory committee of the I.E.A. in Paris, reported that plans are now fairly complete for the first meeting of the Council, scheduled to take place in Monaco on September 10-13, 1950. Professor Haberler was selected at this meeting to serve as ad interim president, to fill the vacancy created by the death of Professor Schumpeter. New officers and members of the Executive Committee will be selected at the September meeting of the I.E.A. and a conference will be held at which papers will be submitted on the subject, "Long-range International Balances." Papers will not be read but will be available in the original tongue and will be the subject of discussions.

Strong delegations of British and French representatives are planning to attend, and Professor Haberler urged that an equally strong delegation be sent from the United States. Professor Haberler explained that UNESCO would contribute funds to defray a substantial part of the expenses but that further financial aid would be necessary in order to insure the organization of the Association and to make the conference a success. It was VOTED to authorize a committee consisting of the President, the Secretary, and the Chairman of the Committee (Gottfried Haberler) to seek financial support from the Rockefeller Foundation. It is understood that a lump sum of $4,000 would insure a successful launching of the I.E.A. as well as proper participation in the conference by delegates from the A.E.A. in the United States. Furthermore, it was VOTED to double A.E.A. dues to the I.E.A. for the first year, our contribution amounting therefore to $400 instead of $200; that the committee be authorized to explore other sources for funds if the Rockefeller Foundation help is not available; and that if no outside financial help can be found, an appropriation up to the amount of $600 be authorized to meet expenses.

6f) *Honors and Awards* (I. L. Sharfman). Two members will have to be appointed for six-year terms on this Committee, to succeed R. T. Bye and F. B. Garver. Names were discussed but appointments have not yet been made.

6g) *Foreign Honorary Members* (W. J. Fellner). A communication from W. J. Fellner submitted a panel of four names which had been screened from an original list of twenty-two names. The procedure in selecting these four was described in the letter.

After consideration of the report, it was VOTED to elect the following economists foreign honorary members of the Association: R. F. Harrod, of Oxford, England; J. R. Hicks, of Oxford, England; Mrs. Joan Robinson, of Cambridge, England; and Jan Tinbergen, of Rotterdam, Holland. The Secretary was instructed to send invitations to these duly elected candidates.

It was suggested that the Committee be asked to present a considerable number of candidates from several countries and submit biographical sketches of these candidates for the consideration of members of the Executive Committee.

6h) *Academic Freedom* (F. C. Mills). No report was submitted by this Committee but several matters not coming within the terms of the Committee's function were discussed; e.g., the security provisions of the National Science Foundation and the University of California oath situation. Although the latter item was not deemed to fall within the province of the Committee on Academic Freedom, it was VOTED that Professor Gordon keep President Knight informed of events and that the President, at his discretion, draft a letter to circulate to members of the Executive Committee for their approval and signatures, the letter to be transmitted to the appropriate officials of the University of California as an expression of the signers' judgment based upon the known facts.

6i) *Nominating Committee* (C. B. Hoover). After dinner the members of the Nominating Committee (C. B. Hoover, Chairman, H. R. Bowen, Carter Goodrich, Elizabeth Hoyt, A. C. Neal, and Jacob Viner) convened with the Executive Committee to consider nominations for the president of the Association for 1951 and for representatives to the Councils. After discussion of a panel of names submitted by the Nominating Committee, there being no names added by members of the Executive Committee, members of the Electoral College proceeded to ballot for the office of president. This being completed, F. H. Knight was elected as our representative for the four-year term to the A.C.L.S. and T. W. Schultz for the three-year term to the S.S.R.C. Names under consideration by the Nominating Committee for the office of vice-president and for the members of the Executive Committee were submitted and discussed. It was VOTED to announce the slate of nominees in the June number of the *American Economic Review.*

7. *Old Business.*

Several items of old business were discussed but without formal action; e.g., what to do about statements by economist propaganda groups which are or may be interpreted as representing the views of the profession; the publication of a list of private economic institutes, boards, foundations, and committees. The *ad hoc* committee to study and report on the managing editorship of the *Review* has not yet been constituted but some appointments are being made.

8. *Reports of Council Members.*

No new developments were reported by our representatives. The presence of Messrs. Odegaard and Webbink from the A.C.L.S. and S.S.R.C., respectively, enabled many of us to make direct contacts with officers of these Councils. It was VOTED to refund traveling expenses of our Secretary to the January, 1950, meeting of the A.C.L.S.

9. *New Business.*

The Secretary was instructed to return funds which future donors contribute to the defunct Committee on Aid to Foreign Scholars for their distribution.

The balance of the meeting was devoted to the consideration of the program and arrangements for the annual meeting to be held at the Palmer House, Chicago, December 27-30, 1950. Mr. Charles G. Wright, of the Research Department of the Federal Reserve Bank of Chicago, has been appointed Chairman of the Local Arrangements Committee.

2. Minutes of the Christmas meetings of the Executive Committee held in Chicago, Illinois, December 26 and 30, 1950:

The *third meeting* of the *1950 Executive Committee* was held at the Palmer House, Chicago, December 26, 1950. President Frank H. Knight presided. Others present were: J. W. Bell, A. F. Burns, L. V. Chandler, H. S. Ellis, P. T. Homan, R. A. Lester, E. S. Mason, Clair Wilcox, and J. H. Williams. Absent were: P. H. Douglas, R. A. Gordon, B. F. Haley, and P. A. Samuelson.

The *first meeting* of the *1951 Executive Committee* was held on December 30, with the following members present: J. H. Williams, presiding, J. W. Bell, L. V. Chandler, H. S. Ellis, A. G. Hart, F. H. Knight, P. A. Samuelson, and D. H. Wallace. Absent were: A. F. Burns, J. B. Condliffe, P. H. Douglas, C. D. Edwards, R. A. Gordon, and P. T. Homan. Also attending, as guests, were: S. E. Leland, F. A. Lutz, J. J. Spengler, and J. V. Van Sickle.

The account of the proceedings given below does not follow the chronological order of business but treats the sequence of items as they were listed on the agenda.

1. *Minutes.* The minutes of the April meeting were approved as corrected.

2, 3, and 4. *President's Remarks* (F. H. Knight); *Report of the Secretary-Treasurer* (J. W. Bell). After introductory remarks by the President, Professor Bell presented a review of the activities of the year and a report of the financial operations and condition of the Association. Reports of the Secretary, the Treasurer, the Finance Committee, and the Auditor may be found below.

It was VOTED to approve the action of the President and Secretary in increasing the original printing from 2,000 to 2,500 copies and of ordering an additional 2,000 of the report, "The Problem of Economic Instability."

It was VOTED to authorize the Secretary, in consultation with the President, to permit the use of the Association's mailing list for commercial purposes.

It was VOTED to authorize the Treasurer to write off the item, "Fund for Proposed Secretariat," for $35.00, from our asset account.

The Treasurer was authorized by VOTE to add one more member to the Finance Committee.

A VOTE of appreciation was ordered transmitted to David Himmelblau and Company for services rendered in auditing the books of the Association and an expression of thanks was also VOTED to members of the Finance Committee.

The Secretary was authorized by VOTE to arrange social security coverage for the office staff of the Association.

It was VOTED to increase the salaries of Gertrude Tait and Doris Merriam $250.00 annually.

5. *Report of the Managing Editor of the Review* (P. T. Homan). After reading his report, Professor Homan presented a budget for 1951, which was approved by VOTE. A panel of names was discussed, from which two members of the Editorial Board—Milton Friedman and L. G. Reynolds—were selected for three-year terms, to succeed G. J. Stigler and F. H. Harbison.

The list of prospective retirements authorized for publication in the December number of the *Review* will appear in the March issue.

6. *Committee Reports.*

6*a*) *Publications* (F. A. Lutz). Professor Lutz reviewed the financial reports submitted by The Blakiston Company covering the year's operation with respect to printings, sales, and inventory of Volumes I-IV of the republications series and the *Survey of Contemporary Economics.* He reported that Volumes V and VI of the series are in press and that

Volume VII is still in the early stages of preparation; that the co-sponsored volume on *The Scope and Method of Economic History* has not yet materialized; and the progress on the *Survey*, Volume II, presages its appearance sometime late in 1951 or early in 1952. Volume I of the translation series, namely Walras' *Elements d'Economie Politique Pure,* will in all likelihood be completed sometime during the year. Publication arrangements for this and subsequent volumes of the translations series were discussed at a meeting with the Blakiston representatives but no contract has been drawn up.

6*b*) *Research* (S. E. Leland). Dean Leland announced that a conditional grant of $8,000 had been promised by the Carnegie Corporation which with the $2,000 appropriated by the Association will provide the $10,000 needed to publish *Survey* Volume II.

It was VOTED to authorize the President or the Secretary to express to the officers of the Carnegie Corporation the Association's willingness to accept and disburse the grant of $8,000 for financing the preparation and publication of the *Survey of Contemporary Economics,* Volume II. It is understood that the advance made by the Carnegie Corporation will be recouped from the sale of this volume and that the Carnegie Corporation will have a prior claim on the proceeds from sales. On behalf of the Association, the Executive Committee thanks the Carnegie Corporation for this advance and the confidence implied in the worthiness of the project and our ability to make it a successful venture.

Dean Leland reported that Volume I of the projected translation series is going ahead according to plan and that a second volume, namely, Pareto's *Manuel,* is being investigated. The translation of Pareto, together with an introduction and critique, may at the same time serve as a Ph.D. dissertation. Hence no translator's royalty would be involved. Other proposals have been studied but action is withhheld pending results from the first two volumes.

6*c*) *Public Issues* (S. H. Slichter). A report from Professor Slichter was read, calling attention to the conclusion of the work of the Subcommittee on Economic Stability. He discussed at length the difficulties involved in compiling a satisfactory mailing list for the free circulation of the report. The fund contingently provided for the distribution of 2,000 copies has not been utilized, and it was not clear what intracommittee allocations had been made. Therefore it was VOTED to appropriate an additional $100 to the Committee on Public Issues, earmarked for the purpose of distributing 1,000 copies of the "Problem of Economic Instability," which number of copies the Secretary was asked to hold for this purpose.

6*d*) *International Co-operation; the I.E.A.* (Gottfried Haberler). Copies of the report were received and distributed. An oral report on the Monaco meeting was presented by Professor John Van Sickle at the Business Meeting. Future plans and commitments are to be discussed at the spring meeting of the Executive Committee. The Treasurer reported that no part of the sum of $400 voted as our contribution to the I.E.A. for the first year had been requested, nor was it necessary to spend any part of the $600 set aside for travel expenses of our delegates to the Monaco meeting, owing to the fact that we received a grant of $2,000 from the Rockefeller Foundation for the purpose of assuring adequate representation at that conference.

6*e*) *Honors and Awards* (I. L. Sharfman). No report has been submitted, but a communication from the chairman indicates that the Committee is active in preparing a report for the April meeting.

6*f*) *Foreign Honorary Members* (William Fellner). The Committee is engaged in enlarging the panel of names and may have a report to submit at the April meeting.

6*g*) *Academic Freedom* (F. C. Mills). No matters have been submitted to this Committee for its consideration in 1950.

The California loyalty oath situation was discussed, but no formal action was taken. Professors Ellis, Mason, and Wilcox were delegated to draft a resolution expressing the sense of the members present which is to be communicated to E. S. Shaw, R. A. Gordon, and the acting chairman of the Department of Economics at California and to Dean Neil Jacoby.

6*h*) *Teaching* (Horace Taylor). The report of this Committee, appearing as a supplement to the December number of the *American Economic Review,* represents work which has materialized during the past five years of activity on the part of the Committee and the eleven subcommittees. With this report at hand, it was VOTED to discharge the Committee, with thanks.

A communication from Professor Taylor was read, asking reconsideration of points 4 and 5 of the committee report of a year ago (see *Papers and Proceedings,* May, 1950, page 623). A vote was taken to invite Horace Taylor and Howard R. Bowen to appear before the Committee to answer questions and explain their recommendations but this vote was rescinded.

Money advanced for the expenses of the Committee on Teaching amounting to $1,200 over the five-year period has now been spent except for a balance of $174.17, which was refunded by Professor Taylor. The expense of the publication of the monograph on teaching (amounting to about $3,500) was authorized by separate vote last year.

6i) *Ad Hoc Committee on Graduate Training in Economics* (H. R. Bowen). The report of this Committee was considered and accepted. Professor J. J. Spengler described the activities of the S.S.R.C. which deal with recruitment and the education of social scientists. It was suggested that we invite Dr. Joseph H. Willits to the April meeting to discuss both the teaching and the graduate study reports.

6j) *Ad Hoc Committee to Select New Managing Editor* (F. H. Knight). On recommendation of the Committee, it was VOTED to appoint Professor B. F. Haley as Managing Editor of the *American Economic Review* for a three-year term, accession to the office beginning one year hence.

6k) *Nominating* (J. H. Williams). The following names were submitted by Professor Williams as members of the Nominating Committee to make up the slate of next year's officers: H. S. Ellis, California, Chairman, K. R. Bopp, Philadelphia, G. A. Elliott, Toronto, C. P. Kindleberger, M.I.T., L. A. Metzler, Chicago, and W. H. Nicholls, Vanderbilt. The suggestion of names met with approval.

7. *Reports of Council Members.*

7a) *A.C.L.S.* (F. H. Knight). A brief oral report was made. It was VOTED to invite G. J. Stigler as alternate at the meeting of the A.C.L.S. at Rye, New York, January 25-26, since Professor Knight will be absent in Europe at that time. Travel expenses of the Secretary were approved.

7b) *S.S.R.C.* (H. A. Innis, G. W. Stocking, J. J. Spengler). A report was submitted by J. J. Spengler. This report is printed below.

7c) *N.B.E.R.* (D. H. Wallace). No report was presented but one was later received for publication. It appears below.

8. *Annual Meeting.* The following votes were taken with respect to time and place of future meetings:

1953 Washington, D.C.—Statler Hotel, headquarters
1955 New York, New York—Hotel Commodore and Grand Central Zone hotels.

The action regarding the 1955 meeting was taken previously but was reconsidered in the light of the request from the A.A.A.S. that we release these hotels and take up their reservations in the Penn Zone and it was VOTED not to change our plans.

9. *New Business.*

9a) It was VOTED to hold the spring meeting of the Executive Committee at Princeton Inn, Princeton, New Jersey, the first or second week-end of April.

9b) It was VOTED to authorize the Secretary and Editor of the *Papers and Proceedings* to publish this volume in two parts if he deems it advisable to publish Volume I at an early date and Volume II after the peak load at the printers has been passed.

9c) It was VOTED to authorize the Secretary at his discretion to mail separately membership dues bills and the program, ballot materials, etc.

ACTIVITIES AND OPERATIONS

Annual Meetings. In keeping with the policy of co-operating with allied social science associations while at the same time recognizing the special interests of individual societies, we have this year made independent arrangements to meet at the Palmer House, Chicago, and to present our own program. We have attempted to follow the plan announced two years ago and described at the Business Meeting last year (see Minutes of December 29, 1949). Eight associations decided to meet in Chicago and joint sessions have been arranged with six of these—principally with the American Statistical Association, the American Finance Association, and the Econometric Society. Several associations are scheduling their annual meeting at other seasons of the year (e.g., American Farm Economic Association, American Sociological Society), but some of them are sponsoring special sessions with us at this time. Twenty-nine sessions have been arranged on our program and we are assuming responsibility for twenty-two. The present meetings are therefore only somewhat more limited than the over-all joint sessions held every third year, and the problems of local arrangements and publication outlets for papers are about as pressing at independently arranged meetings as at the joint meetings. Next year we plan to meet at the Statler Hotel in Boston on an independent basis and in 1952 an over-all joint session is scheduled in Chicago, with the Stevens Hotel as our headquarters. An over-all meeting of the same type is planned for New York City in 1955. Independent meetings are planned for 1953 (in Washington, D.C.) and 1954 (place not yet selected).

Membership. Our membership continues to grow. A net addition of 305 members and 57 subscribers during the past year now gives us 6,936 members and 2,543 subscribers. Including complimentary subscriptions, we have a total of 9,514 names on our mailing list. (See 1948 *Directory,* page 314, for charts showing figures for 1886 to 1948 and Exhibit II below of the Secretary's Report for a breakdown showing changes in regular, junior, family, complimentary, life, and honorary memberships.)

It is not known how many economists there are in the United States but rough estimates can be made. The National Roster on December 31, 1945, listed some 7,349 formally trained economists as registered, of which 6,188 were males and 1,161 females, with a median age of 35.7 years. Of this total, 1,642 had Ph.D. degrees, 1,923 master's, 3,133 bachelor's, and 651 others without degrees. A current "Joint Directory of Higher Education," compiled from university and college catalogues (unpublished), contains the names of 4,003 persons teaching economics exclusively, 1,085 teaching economics and other social sciences, and 887 teaching social sciences in general. A spot check of the 1948 *Directory* seems to indicate that hardly more than half of our members are in the academic profession. It is safe to conclude from this evidence, therefore, that there is still latitude for continued growth in our membership—not counting on any increase in the popularity of economics as a field of interest.

We now print 10,200 copies of our publications—an increase of 400 over last year. The margin of extras to be absorbed by the demands of new members and the growth of subscriptions and sales is not liberal, but we can depend upon repurchase of out-of-print numbers to satisfy urgent demands.

Geographical Distribution. No significant changes in the geographical distribution of our members and subscribers has occurred during the past few years. Concentration of our membership is still heaviest in the northeast, north central, and central states. Foreign members and subscribers continue to increase. The growth of South American subscriptions and memberships has slowed down considerably. (See Table V in the 1948 *Directory,* page 317, for geographical distribution of members and subscribers for selected years, 1933-48, and *Papers and Proceedings,* May, 1945, page 460, for previous years, back to 1919.)

Publications. The status of the *American Economic Review* and the activities of the Editorial Board are covered in the report of the Managing Editor.

The *Papers and Proceedings* again appeared in very substantial size. Every effort was made to prepare and publish the 650-page volume for April mailing, but the publishers were unable to complete the job in time and it again appeared in May. The "Proceedings" section, containing minutes and reports (pages 588-634), was reprinted under separate cover and distributed to officers of the Association and to others on request. The total cost of printing the volume (10,100 copies) was $9,684.76. We are considering the feasibility of issuing the *Papers and Proceedings* in two numbers: Volume I containing the proceedings and a selection of papers of timely interest which are ready for early processing, to appear in February, March, or April, and Volume II containing the balance of the papers presented at the annual meeting, to be published in July or August, when the peak load at the printers has passed.

A 42-page *Supplement to the 1948 Directory* was prepared during the spring and was mailed in July to all members and subscribers. This supplement contains the names and questionnaire sketches of all new members added to our rolls between June 16, 1948, and November 1, 1949. We are planning to issue a supplement containing only names and addresses of new members some time during the ensuing year. Our proposed schedule involves publishing a handbook of names and addresses only for all members and subscribers in 1953 and a revised (seventieth anniversary) directory of the "who's who" type in 1955.

The usual information booklet, describing the purposes and activities of the Association and the character of its publications, was re-edited and distributed to officers and prospective members and others interested.

Photographs of past Presidents Ellis, Adams, Taylor, and Gay appeared as frontispieces in the *Review* this year. The usual biographical sketches appeared on the back of the frontispieces in the case of deceased presidents. Interest in the section of the *Review* devoted to the announcement of vacancies and applications for positions has not increased during the past year, but we still consider it worth while carrying this section. We also consider it a useful service to conduct an Employment Register at the annual meeting where announcements of applications and of vacancies are posted and opportunities for individual interviews are provided.

An innovation appearing for the first time in the March number of the *Review* is the announcement of prospective retirements of professors of economics whose terms expire in June, 1951. It should be understood by our members that this information is sought by us and is not proffered by those retiring.

Committee Activities.

Committee on Publications (F. A. Lutz, Chairman).

a) *Republication Series.* The sponsorship of these volumes has proved very satisfactory. Reprintings have been made of all of the volumes so far issued and profits have resulted. (Up-to-date figures are on file in the Secretary's office.) Volumes V and VI are nearing completion and progress is being made on Volume VII. There has been some delay in the preparation of the volume on the *Scope and Method of Economic History,* cosponsored by the Economic History Association, but the first stages of selection have been accomplished and the *ad hoc* committee is still active. The republication idea is spreading. New, privately initiated volumes of readings are appearing, and more are being announced.

b) *Survey of Contemporary Economics, Volume II.* No recent report of the status of this volume has been received from B. F. Haley, Editor, but we have reason to believe that all ten authors of chapters will have completed their first draft on schedule by February 1, that these will soon thereafter be sent to critics and returned so that final copy, with critics' comments, will be in the Editor's hands in June. The volume will probably be out early in 1952. The Committee on Research has taken an active part in the development of this volume and has succeeded in getting outside financial aid in meeting the initial costs of its preparation.

c) *Translation Series.* A new series of translations of foreign classics was authorized last year (see *Papers and Proceedings,* May, 1950, page 593) and negotiations have been concluded with Professor William Jaffe to prepare Leon Walras' *Elements d'Economie Politique Pure* as Volume I of the series. Professor Jaffe has been released from a contract which he had negotiated with a foreign publisher and we have entered into an agreement with The Blakiston Company to publish this volume under our sponsorship. It will be ready for the press sometime during the year. The translation of Pareto's *Manuel* has been recommended by the Committee on Research and other items have been suggested but the Committee advises withholding action on new proposals until we can appraise our experience with the first two volumss.

Committee on Research (S. E. Leland, Chairman). The Committee is concerned with the preparation of *Survey* Volume II and the translation series, upon which brief reports are made above under the Committee on Publications.

Committee on Public Issues (S. H. Slichter, Chairman). The report of the Subcommittee on Economic Stability (D. H. Wallace, Chairman) was published as a lead article in the September number of the *American Economic Review.* Two thousand reprints authorized at the April meeting of the Executive Committee was augmented by 500, since this printing was bespoken by orders on hand and 25 free copies to authors. Another 2,000 copies has been printed on the responsibility of the Secretary, since no reserve was left from the first printing for the purpose of supplying circulation to a free mailing list for which a $200 appropriation was made. Orders are still coming in and this second printing may be exhausted before the proposed mailing list has been compiled. (Financial status of the Committee on Public Issues shows that the funds allocated to this subcommittee have been practically exhausted and little will be available to shift to the use of the other subcommittee.)

No report has as yet been received from the Subcommittee on International Economic Policies (P. H. McCracken, Chairman), although we understand that several preliminary statements have been drafted. After a recent meeting the composition of this committee was changed. F. W. Fetter resigned and Gottfried Haberler and L. A. Metzler have been added.

Committee on Teaching (Horace Taylor, Chairman). The final report of this Committee, consisting of reports of most of the subcommittees, appears as a 240-page supplement to the December number of the *Review.* The estimated cost of 10,200 copies of this volume is $3,523.14, to which should be added $85.00 excess cost for wrapping separately and tying. The volume was ably edited by Professor Taylor. Since it represents work now completed, it would be appropriate to discharge the Committee with an expression of appreciation.

As an offspring of the Committee on Teaching, a new exploratory committee of three members was established in April, 1950. This Committee is called the Committee on Graduate Training in Economics: H. R. Bowen, Chairman, G. L. Bach, D. G. Johnson, and I. L. Sharfman. The Committee was asked to examine on the need for and character of such a study, and to report at the December meeting, 1950. The sum of $250 was authorized for expenses. The report has been submitted and is printed below.

Committee on International Co-operation; the I.E.A. (Gottfried Haberler, Chairman). A report has been submitted by Professor Haberler, covering the Monaco meeting of the I.E.A., September 10-13, 1950, and outlining plans for the 1951 program. It is expected that one or more representatives of the A.E.A. (Gottfried Haberler, J. V. Van Sickle, Wassily Leontief, and Hal Lary attended) will present an oral report at the annual meeting Friday, December 29, at the Palmer House.

The topic for next year's meeting has been announced as "Monopoly and Competition" and Professor E. H. Chamberlin has been selected chairman of the program committee.

The expenses of our delegates to the Monaco meeting were defrayed in part by a $2,000 grant from the Rockefeller Foundation. We greatly appreciate this financial aid, since it made possible the attendance of two of the delegates who would not otherwise have been able to participate.

Committee on Honors and Awards (I. L. Sharfman). Two new members have been selected to fill the terms of Raymond T. Bye and Frederic B. Garver, deceased; namely, N. S. Buchanan and Fritz Machlup, whose terms therefore run through 1956. (Other members: C. B. Hoover, I. L. Sharfman, 1952; G. L. Bach, E. S. Shaw, 1954.) The duties of this standing committee are continuous. They will, for instance, be expected to submit recommendations during the year for the J. B. Clark award, which will be made in 1951. Also, the 1952 F. A. Walker award will soon call for their attention.

Committee on Foreign Honorary Members (William Fellner, Chairman). We still have a half dozen vacancies before the quota of honorary members is filled. The Committee has made some progress in screening names of potential candidates and has submitted a list for broader consideration. The next step involves enlarging the list and supplying brief biographical sketches.

Committee on Academic Freedom (F. C. Mills, Chairman). No new cases involving academic freedom have materialized during the current year and no report has been received.

Nominating Committee. The President-Elect has been notified that it is his responsibility to appoint a Nominating Committee to propose a slate for next year's officers.

Ad Hoc Committee on Appointment of Managing Editor (F. H. Knight, Chairman). (See Minutes of the Executive Committee meeting of December, 1950.)

Reports of Council Representatives.

American Council of Learned Societies (F. H. Knight). Professors Knight and Bell attended the meetings of the A.C.L.S. at Westchester Country Club, Rye, New York, January 25-27, 1950. The principal matters discussed at the Council meeting, other than the usual reports, concerned the relationship of teaching and research, aiding the progress of scholars, and planning the activities of the A.C.L.S., with particular reference to the ensuing year.

The Conference of Secretaries (one meeting joint with the Board of Directors of the Council) devoted its sessions to the discussion of the problems and policies characterizing the activities of the several societies during the year which were of general interest to all members. Mr. Bell presented the results of an analysis of current financial statements and the desirable form of the treasurer's report to executive boards. Problems of placement and the assessment and utilization of manpower and special problems arising out of current retirement policies also received attention, with Mr. J. F. Wellemeyer leading the discussion. Policies and procedures involved in making the Fulbright awards were discussed. The problem of disposing of back stock of nonperiodical publications prompted the suggestion that Mr. H. M. Silver, Jr., of the Council staff, survey the feasibility of mimeographing a union list of such items for distribution from his office. Mr. Silver reported at a later date that such a project is not feasible. The methods of electing or appointing properly qualified delegates to the Council were re-examined in the light of the specific recommendations voted by the Conference of Secretaries in 1934. The present officers (J. W. Bell, President; W. M. Parker, Secretary) were re-elected for the coming year.

Social Science Research Council (J. J. Spengler, G. W. Stocking, H. A. Innis; T. W. Schultz succeeds J. J. Spengler in 1951). A report of the activities of this Council during the past year is printed below.

National Bureau of Economic Research (D. H. Wallace). With the Director of the National Bureau on the Executive Committee, as well as our representative, we are kept in close touch with the activities of this research organization. Professor Wallace's report appears below.

* * *

Committees Appointed During the Year

Committee on Elections
- Walter A. Weisskopf, *Chairman*
- Louis A. Keller
- James Washington Bell

Committee on Foreign Honorary Members
- William Fellner, *Chairman*
- James W. Angell
- Norman S. Buchanan
- Wassily W. Leontief

Committee to Select New Editor
- Frank H. Knight, *Chairman*
- Howard S. Ellis
- Paul T. Homan
- Jacob Viner
- James W. Angell

International Economic Association Representatives
- Gottfried Haberler
- Howard S. Ellis
- John H. Williams
- John V. Van Sickle

Committee on Publications
- Friedrich A. Lutz, *Chairman*
- Arthur F. Burns
- James Washington Bell

Committee on Graduate Training in Economics
- Howard R. Bowen, *Chairman*
- I. L. Sharfman
- George L. Bach
- D. Gale Johnson

Nominating Committee
Calvin B. Hoover, *Chairman*
Jacob Viner
Elizabeth E. Hoyt
Carter Goodrich
Howard R. Bowen
Alfred C. Neal

Committee on International Economic Policy
Paul W. McCracken, *Chairman*
Gottfried Haberler
Klaus E. Knorr
Paul T. Ellsworth
Lloyd A. Metzler

Members reading this report may be interested in the composition of two other committees not appointed by us but selected from our membership:

An Advisory Selection Committee for Fulbright Awards was appointed by the Conference Board of Associated Research Councils as follows: Carter Goodrich, Columbia University, Chairman; John H. Cover, University of Maryland, Vice-Chairman; James Washington Bell, Northwestern University; Ralph A. Young, Board of Governors of the Federal Reserve System; George W. Stocking, Vanderbilt University; Paul M. O'Leary, Cornell University; Charles F. Remer, University of Michigan; and Ben W. Lewis, Oberlin College.

The Educational Testing Service selected the following for their Committee for the Advanced Test in Economics for the Graduate Record Examination: Joseph J. Spengler, Duke University, Chairman; Clark L. Allen, Florida State University; Kenneth E. Boulding, University of Michigan; Mary Jean Bowman, Lexington, Kentucky; and Ben W. Lewis, Oberlin College.

A Committee on the Mathematical Training of Social Scientists, constituted by the Mathematical Association of America, the Institute of Mathematical Statistics, and the Econometric Society, invited our Association to nominate representatives: Paul A. Samuelson, Massachusetts Institute of Technology; O. H. Brownlee, University of Minnesota.

Representatives of the Association on Various Occasions

International Economic Association, September 10-13, 1950, Meeting at Monaco
Gottfried Haberler
Wassily W. Leontief
John V. Van Sickle
Hal B. Lary

Diamond Jubilee of Founding of Brigham Young University
A. Smith Pond

Convocation for Presentation of University Charter of Saint Bonaventure University
James L. Hayes

Dedication of Science Hall, Incarnate Word College
George B. Kohnen

Convocation Commemorating the Centenary of the Founding of the University of Dayton
Thomas F. McManus

Inauguration of University and College Presidents:
William Carrington Finch, Southwestern University
L. H. Merzbach

Paul Marsh Pitman, College of Idaho
  Wendell L. Bollinger
John Christian Warner, Carnegie Institute of Technology
  Marion K. McKay
Gordon Gray, University of North Carolina
  Calvin B. Hoover
Louis Linden Madsen, Utah State Agricultural College
  Dilworth Walker
Harold Wayland Tribble, Wake Forest College
  Lloyd B. Saville

Use of Mailing List

The use of our mailing list to send the materials indicated was granted to the following:

Swift & Company: Their *Year Book*
Citizens Committee for the Hoover Report: Pamphlet, "Students and the Hoover Report"
University of California Press: *Announcement of Business Cycles in Selected Industrial Areas,* by Neff and Weifenbach
Federal Council of Churches of Christ in America: Their *Information Service*
Institute of Life Insurance: Graphic Facts Chart; 1950 *Life Insurance Fact Book*
M. W. Drexler Book Company: Their Catalogue
National Association of Secondary-School Principals: Information about *A College Course in Consumer Problems*
Cambridge University Press: Announcement of *The Distribution of Consumer Goods,* by James B. Jeffreys
Public Affairs Institute: Their studies
Princeton University Press: Announcement of Cowles Commission study, *Economic Aspects of Atomic Power*
Council on Foreign Relations: Announcement of *The Economics of Freedom,* by Howard S. Ellis

* * *

It is with regret that the names of the following persons have been removed from our active membership list, notice of their deaths having been received during the year.

Sister Mary Elise
Frederic B. Garver
John M. Glenn
Emory R. Johnson
Harold Kelso
John N. Keynes (Life Member)
Esmond Phelps
William L. Ransom
Lessing Rosenthal (Life Member)
Algie M. Simons
Janet R. Sundelson
Francis Walker
Dean Langmuir
John E. Mason
Russell Weisman
Charles G. Woodward

Respectfully submitted,
JAMES WASHINGTON BELL, *Secretary*

EXHIBIT I

PUBLICATION COSTS

	PROCEEDINGS			HANDBOOKS		
Year*	Number of Pages	Number of Copies	Cost	Number of Pages	Number of Copies	Cost
1930	222	4,300	$1,353.91			
1931	308	4,300	1,919.18	88	4,200	$ 589.54
1932	316	4,200	1,819.75			
1933	216	4,000	1,284.85	88	3,900	522.71
1934	232	3,700	1,192.91			
1935	248	4,000	1,347.88			
1936	360	4,200	2,037.90	58	4,100	454.36
1937	344	4,300	1,922.03			
1938	200	4,500	1,234.10	112	4,500	1,118.84†
1939	288	4,600	1,785.91			
1940	444	4,900	2,658.12	108	5,000	822.58
1941	479	5,200	3,294.45			
1942	548	5,400	3,909.79	208	5,500	1,775.72†
1943	535	5,500	3,652.56			
1944	470	5,800	3,350.40			
	144	5,900	1,215.22‡			
1945	536	6,400	4,502.84			
1946	960	6,700	8,149.90	143	6,900	2,035.71
1947	781	7,700	8,140.79			
1948	591	8,500	8,701.41	345	7,700	6,948.07†
1949	537	9,500	7,844.50			
1950	650	10,100	9,684.76	41	9,200	1,163.84†

* This is the year of publication and pertains to the meeting of the preceding year. The figures are published in the subsequent year.

† "Who's who" volumes; 1950, supplement.

‡ Part of papers presented at annual meeting published as supplement to June number.

EXHIBIT II

MEMBERS AND SUBSCRIBERS

Class of Membership	Totals 11/30/49	Added	Removed	Gain or *Loss*	Totals 11/30/50
Annual	5,754	798*	486†	312	6,066
Junior	688	552‡	586§	*34*	654
Family	111	27	13	14	125
Complimentary	25	3	2	1	26**
Life	36	11	3	8	44
Honorary	17	4	–	4	21
	6,631	1,395	1,090	305	6,936
Subscribers	2,486	676	619	57	2,543
Complimentary	18	18	1	17	35
Totals	9,135	2,089	1,710	379	9,514

* Includes 262 junior members changed to annual.

† Resigned, 91; nonpayment, 264; died, 14; lack of address, 42; changed to junior, 74; changed to family, 1.

‡ Includes 74 annual members changed to juniors.

§ Includes 262 junior members changed to annual.

** Includes 7 who do not receive publications.

REPORT OF THE TREASURER OF THE ASSOCIATION FOR THE YEAR ENDING NOVEMBER 30, 1950

Income and Expenses. Operating results for the current fiscal year are compared in the table below with those of last year and five years ago. Sources of income are indicated, as are the major items of expenditure, both administration and publication. In this presentation, all sources of income and of expenditures are grouped together; hence it differs from the accounting found in the Auditor's Report which separates publication results from the rest; i.e., publication expense is shown in the Auditor's Report less publication income. See exhibits in Auditor's Report for details.

Comparative Results of Operations for 1950, 1949, and 1945

Income	11/30/50	11/30/49	12/11/45
Membership dues	$38,462	$31,121	$20,260
Subscriptions	14,273	12,254	8,456
Sales	2,863	1,863	1,056
Advertising	8,048	7,775	1,652
Directory income (net)	*	1,410	—
Republications income	—	1,000	—
Dues and publications income	$63,646	$55,423	$31,424
Interest	$ 1,117	$ 1,117	$ 1,480
Dividends	3,860	3,170	2,489
Less custodian fees	*131*	*126*	*107*
Sales of securities (net)	—	48	2,161
Investments (less fees)	$ 4,847	$ 4,209	$ 6,024
Total income	$68,493	$59,632	$37,448
Expenses			
Office salaries	$11,837	$11,637	$ 5,603
Other administrative expenses	2,610	3,275	1,522
Annual meeting	*431*	*470*	1,498
Executive Committee	1,146	1,700	699
Other committee expense	523	864	320
Review moving expense	716	—	—
Administrative and operating	$16,402	$17,006	$ 9,642
Review printing	$24,519	$20,165	$10,588
Papers and Proceedings printing	9,685	8,196	4,502
Directory printing	1,164	—	—
Editorial office (*Review*):			
Contributors	1,573	1,667	1,668
Editorial and clerical salaries	7,475	7,243	5,800
Other expenses (net)	563	405	331
Publications	$44,979	$37,676	$22,889
Total expenses	$61,381	$54,682	$32,531
Net operating income	$ 7,112	$ 4,950	$ 4,916
Appropriations	*2,000*	—	*7,500*
Net income or *deficit*	$ 5,112	$ 4,950	*$ 2,584*

* Included in sales figure.

Total income from all sources for the fiscal year amounted to $68,493, or $8,861 more than in 1949. This increase is largely the reflection of the increase in dues and subscriptions from $5.00 to $6.00. Sales to others than members and subscribers (which included about $700 *Directory* sales) also increased, as did income from advertising. No profits were taken from sales of our republications volumes. Income from bond holdings remained stationary and dividends were somewhat larger than in 1949.

Total expenses amounted to $61,381, or $6,699 more than for 1949. Increased printing costs of the *American Economic Review* and the *Papers and Proceedings*, plus the *Directory Supplement*, largely account for the difference. Increased office wages were partially offset by decreased administrative and committee expenses. Contributors payments were less this year than last due to the substitution of a committee report in the September number of the *Review* for articles.

Net operating income of $7,112 was some $2,000 above that for last year. A $2,000 appropriation for the initial expense of *Survey* Volume II (not yet drawn upon) left a net income of $5,112, which is $162 above that of last year.

A comparison of the figures, item by item, of current years with those of five years ago indicates balanced growth.

Committee Appropriations. Over the past five years the Executive Committee has made appropriations to implement the work of several committees. Appropriations, amounts expended, and balances unexpended are analyzed in the following table. Only one new appropriation was made during the year; namely, the $2,000 referred to above for the Research Committee.

Committee	Amount Appropriated	Expended Previously	Expended During Year	Balance Unexpended 11/30/50
Research	$3,500	$ 987	$352	$2,161
Teaching	2,000	1,200	—	800
Public Issues	1,500	937	317	246
	$7,000	$3,124	$669	$3,207

Financial Condition. Condensed balance sheet figures below show comparative status of the principal assets and liabilities for the current year, last year, and five years ago.

Asset items call for only brief explanation. Cash increases when dues and subscription bills are paid and is drawn upon to meet current expenses. Receivables represent unpaid dues and sales and advertising in the December number of the *Review*. Prepaid expenses represent chiefly insurance policies in force and supplies on hand. Investments represent our holdings of stocks and bonds at cost; i.e., $85,087 (market 11/30/50, $104,177).

Liabilities consist of accounts payable to printers (of which the December number of the *Review* is the big item), deferred income (e.g., prepaid membership dues and subscriptions), life memberships, the membership extension fund (discussed fully in the 1944 Treasurer's Report in *Papers and Proceedings*, pages 472-477), and unexpended committee appropriations. Money held in custody for the Allied Social Science Associations since the joint meeting of 1941 has been distributed to the associations concerned; thus liquidating the fund. Since there seems to be little likelihood of establishing a full-time secretariat the $35 fund for that purpose carried on the books since 1937 has by recent action also been written off.

Deducting the above liabilities from total assets gives the item unappropriated surplus in the amount of $68,606, which represents a backlog of resources available to meet current expenses when current income fails to cover such expenses. The history of net annual income or deficit from 1909 to 1944 and the growth of accumulated surplus may be found in the Treasurer's Report in the *Proceedings* for May, 1945, pages 472-477. The surplus figure reached a high of about $69,000 in 1946; then declined to $58,200 in 1948; and now, after two years of surpluses again, approximates the record high. We cannot foresee any marked increase in income in the near future. Our modest $6.00 dues will not long maintain a balanced budget if prices of paper, printing, and other services continue to rise. It is indeed comforting to know that we have some capital resources to fall back upon and can move ahead with developmental activities without fear of bankruptcy. We can feel some assurance, also, that our members will not drift away on account of added expenses involved in supporting more specialized or cognate organizations because our dues are "too high" to belong to both or several associations.

Assets	11/30/50	11/30/49	12/11/45
Cash on deposit and on hand	$ 16,035	$ 7,456	$ 4,510
Receivables (net)	3,144	3,422	1,201
Prepaid expenses and inventories	452	779	345
Furniture and fixtures (net)	937	675	437
Investments at cost:			
Bonds	33,109	33,109	36,706
Stocks	51,979	48,427	44,956
Total assets	$105,655	$93,869	$88,155
Liabilities and Surplus			
Accounts payable	$ 9,100	$ 6,080	$ 3,904
Withheld tax	—	—	122
Allied Social Science Associations	—	829	829
Deferred income	18,540	16,366	5,166
Membership extension fund	966	1,088	1,558
Fund for proposed secretariat	35	35	35
Committee appropriations (not expended)	3,208	1,877	6,776
Life memberships	5,200	4,325	3,750
Surplus:			
Balance at beginning of period	$ 63,269	$58,219	$68,349
Transfers from life memberships	225	100	250
Net income or *loss* for period	5,112	4,950	*2,584*
Unappropriated surplus	$ 68,606	$63,269	$66,015
Total footings	$105,655	$93,869	$88,155

Respectfully submitted,

JAMES WASHINGTON BELL, *Treasurer*

Investment Portfolio

Year	At Par	Cost			Market
	Bonds	Bonds	Stocks	Total	Stocks and Bonds
1925	$25,000	$24,661.75		$24,661.75	
1926	27,000	26,623.25		26,623.25	
1927	29,000	28,688.45		28,688.45	
1928	29,000	28,633.45		28,633.45	
1929	31,000	30,569.48		30,569.48	
1930	31,000	32,439.48		32,439.48	$32,635.40
1931	39,500	39,134.48		39,134.48	32,307.44
1932	40,500	41,134.48		41,134.48	33,239.70
1933	33,500	32,962.48	$ 3,954.23	36,916.71	31,522.50
1934	31,500	30,989.48	3,954.23	34,943.71	34,714.00
1935	16,000	15,280.48	28,114.50	43,394.98	50,338.72
1936	17,000	16,260.13	33,712.57	49,972.70	62,991.00
1937	20,000	19,160.91	37,399.20	56,560.11	52,064.75
1938	22,000	20,180.95	38,302.20	58,483.15	58,598.88
1939	22,000	20,039.57	41,155.95	61,195.52	61,529.38
1940	25,000	22,519.80	41,155.95	63,675.75	60,553.88
1941	25,000	22,439.81	41,155.95	63,595.76	58,606.11
1942	27,000	24,651.12	41,556.06	66,207.18	58,211.88
1943	28,000	23,822.54	40,071.31	63,893.85	66,012.12
1944	30,000	25,731.51	46,033.81	71,765.32	81,844.01
1945	40,000	36,705.95	44,955.81	81,661.76	103,574.76
1946	40,000	37,964.08	47,422.89	85,386.97	93,682.61
1947	40,000	37,964.08	48,755.67	86,719.75	95,398.25
1948	35,000	33,108.63	48,624.14	81,732.77	84,841.91
1949	35,000	33,108.63	48,426.69	81,535.32	89,196.86
1950	35,000	33,108.63	51,978.53	85,087.16	104,177.27

Return on Investments

Year	Bonds	Stocks	Total	Rate of Return on Cost
1925	$1,350.00		$1,350.00*	
1926	1,410.00		1,410.00*	
1927	1,524.70		1,524.70†	
1928	1,642.77		1,642.77†	
1929	1,575.44		1,575.44†	
1930	1,695.21		1,695.21	5.22%
1931	1,886.81		1,886.81	4.82
1932	2,014.36		2,014.36	4.89
1933	1,679.49	$ 108.57	1,788.06	4.84
1934	1,593.13	218.07	1,811.20	5.18
1935	1,022.96	680.70	1,703.66	3.92
1936	801.77	1,597.63	2,399.40	5.00
1937	884.87	2,689.62	3,574.49	6.31
1938	928.04	2,063.02	2,991.06	5.11
1939	978.79	1,781.52	2,760.31	4.51
1940	1,037.56	2,182.46	3,220.02	5.06
1941	1,088.97	2,497.35	3,586.32	5.64
1942	1,306.49	2,186.17	3,492.66	5.28
1943	1,133.97	2,094.47	3,228.44	4.90
1944	992.67	2,410.57	3,403.24	4.60
1945	1,479.99	2,488.85	3,968.84	4.71
1946	1,213.65	2,441.13	3,654.78	4.30
1947	1,227.31	2,909.85	4,137.16	4.77
1948	1,194.85	2,944.31	4,139.16	5.06
1949	1,117.50	3,169.73	4,287.23	5.26
1950	1,117.50	3,860.39	4,977.89	5.85

* Estimated income for year.
† Certificate of deposit interest included.

REPORT OF THE FINANCE COMMITTEE

The status of our investment holdings this year compared with last on the basis of cost and market value is as follows:

INVESTMENT ACCOUNT

	Cost of Holdings		Market Value	
	11/30/49	11/30/50	11/30/49	11/30/50
Bonds	$33,109	$33,109	$30,381	$ 31,584
Stocks	48,427	51,979	58,815	72,593
	$81,536	$85,088	$89,196	$104,177

Only a few changes have occurred during the past fiscal year: Our holdings of 10 shares National Dairy Products were rounded out to an even 100 shares by investing $3,551.84 in January; a 1½ split in Procter and Gamble shares increased our holdings from 50 to 75 shares; and a 2 for 1 split in General Motors increased our holdings from 50 to 100 shares. We have since made a few other shifts and these will be recorded in our next report.

Several meetings of this Committee have been held and we have reviewed our investment holdings on three different occasions. Again this year we contemplated shifting governments into other securities with higher yields but contingent Association outlays prompted us to hold governments for liquidation when cash needs arose. Such needs did not materialize and our government holdings have remained intact.

Income from bonds has remained stationary but greatly augmented dividends this year have increased the return on our investments to a high rate of 5.85 per cent on cost.

Respectfully submitted,

ROY C. OSGOOD, *Chairman*
CHARLES C. WELLS
JAMES WASHINGTON BELL

LIST OF SECURITIES HELD BY THE ASSOCIATION

BONDS

Amount	Issue	Cost	Value Market or Last Sale 11/30/50
$3,000	Chicago and Northwestern Ry. 4½% 2nd Mortgage Bonds due 1999	$ 2,431.50	$ 1,965.00
3,000	Illinois Central Ry. St. Louis Div. 3% due 1951	2,212.50	3,009.38
3,000	New York Central Ry. 4½% Ref. and Imp. Series "A" due 2013	2,437.50	2,077.50
5,000	New York, New Haven and Hartford Ry. Co. 1st and Ref. Mtg. "A" 4% due 2007	4,755.00	3,556.25
1,000	Pennsylvania Ry. Co. 4¼% Gen. Mortgage Series "D" due 1981	986.50	1,006.25
1,000	Pere Marquette Railway Co. 3⅜% 1st Mortgage due 1980	1,000.00	1,026.25
1,000	Reading Co. 3⅛% 1st and Ref. Series "D" due 1995	1,010.00	930.00
3,000	U. S. Defense Bonds, Series "G" 2½% due 1954	3,000.00	2,901.00
8,000	U. S. Treasury Bonds 2½% due 6-15-72/67	8,000.00	8,057.50
7,000	U. S. Treasury Bonds 2½% due 12-15-72/67	7,275.63	7,055.13
		$33,108.63	$31,584.26

STOCKS

Number of Shares of Common Stock	Issue	Cost	Value Market or Last Sale 11/30/50
25	Chesapeake and Ohio Ry. Co.	$ 1,309.07	$ 787.50
55	Commonwealth Edison Co.	1,525.51	1,491.88
50	General American Transportation Corp.	3,084.30	2,550.00
100	General Electric Co.	2,738.19	4,750.00
100	General Motors Corp.	2,057.47	4,612.50
118	Glidden Co.	1,635.72	3,171.25
62	Gulf Oil Corp.	3,714.97	4,929.00
100	Houston Lighting and Power Co.	3,153.48	5,100.00
100	Kroger Co.	3,703.47	6,775,00
25	Liggett and Myers Tobacco Co.	1,869.23	1,884.38
50	Link Belt Co.	2,524.15	3,775.00
50	Monsanto Chemical Co.	3,120.74	3,725.00
100	National Dairy Products Corp.	3,862.69	4,700.00
25	J. C. Penney Co.	370.13	1,706.25
75	Procter and Gamble Co.	2,459.72	5,193.75
80	Standard Oil Co. of Indiana	3,329.47	4,490.00
75	Union Carbide and Carbon Corp.	1,433.94	3,862.50
100	Wayne Pump Co.	3,114.65	1,387.50
Number of Shares of Preferred Stocks			
25	Crane Co. 3¾% Cumulative Pref.	2,550.00	2,550.00
14	Glidden Co.	735.00	757.75
25	International Harvester Co.	3,686.63	4,393.75
	Total stocks	$51,978.53	$ 72,593.01
	Total bonds	33,108.63	31,584.26
		$85,087.16	$104,177.27

REPORT OF THE AUDITOR

December 15, 1950

Executive Committee,
American Economic Association,
Evanston, Illinois.

DEAR SIRS:

In accordance with instructions we have examined the accounts and related records of the American Economic Association for the year ended November 30, 1950, and now submit our report thereon together with the following exhibits:

Balance Sheet—November 30, 1950	Exhibit 1
Statement of Income and Expenses for year ended November 30, 1950	Exhibit 2

Results from Operations

Net income for the year ended November 30, 1950, was $5,112 compared with net income for the year ended November 30, 1949, of $4,950 as shown in the following summary:

Particulars	Year Ended Nov. 30, 1949	Year Ended Nov. 30, 1950	Increase *Decrease*
Income:			
Dues	$31,121	$38,462	$7,341
Interest and dividends (net)	4,161	4,847	686
Profit on sales of securities	48	—	*48*
Republication income	1,000	—	*1,000*
Total income	$36,330	$43,309	$6,979
Expenses:			
Administrative and other operating expenses	$17,006	$16,402	$ *604*
Publication expenses	37,676	44,979	7,303
Publication income	*23,302*	*25,184*	*1,882*
Total expenses	$31,380	$36,197	$4,817
Net operating income	$ 4,950	$ 7,112	$2,162
Appropriations for special committees	—	2,000	2,000
Net income	$ 4,950	$ 5,112	$ 162

The $7,341 increase in dues income reflects (1) the increase in annual dues of regular members from $5.00 to $6.00 and (2) the 305 increase in membership during the period under review reported by the secretary as shown below:

Classification	Number of Members Nov. 30, 1949	Number of Members Nov. 30, 1950
Regular	5,754	6,066
Junior	688	654
Family	111	125
Life	36	44
Honorary	17	21
Complimentary	25	26
Totals	6,631	6,936

Interest on bonds owned was accounted for in accordance with stated rates; dividends received on stocks were compared with amounts reported in published records of dividends paid.

Net publication expense, as shown in the following summary, amounted to $19,795 for the current period compared with $14,374 for the preceding period:

Particulars	Year Ended Nov. 30, 1949	Year Ended Nov. 30, 1950	Budgetary Estimates for Calendar Year 1950
Expenses:			
Printing of—			
Review	$20,165	$24,519	$20,000
Directory and Handbook	—	1,164	—
Proceedings	7,845	9,685	—
Editor's honorarium	2,500	2,500	2,500
Payments to contributors	1,667	1,573	1,750
Editorial clerical salaries	4,743	4,975	5,000
Editorial supplies and expenses	661	639	500
Sundry publication expenses	95	76	—
Total expenses	$37,676	$44,979	
Less—Income:			
Subscriptions, other than members	$12,254	$14,273	
Sales of copies	1,863	2,863	
Advertising	7,775	8,048	
Directory income	1,410	—	
Total income	$23,302	$25,184	
Net publication expense	$14,374	$19,795	

The December, 1950, issue of the *Review* including supplement had not been printed at the time of our examination. The publishers of the *Review* estimated the expense of printing 10,200 copies at $8,723 and this amount is included in the costs above.

Changes during the year ended November 30, 1950, in Committee Funds Appropriated (not expended) are analyzed below:

Funds	Unexpended Balance Nov. 30, 1949	Appropriation During Year	Less—Expended During Year	Unexpended Balance Nov. 30, 1950
Committee on Research	$ 513.49	$2,000.00	$352.02	$2,161.47
Committee on Undergraduate Teaching of Economics and Training of Economists	800.00	—	—	800.00
Committee on Public Issues	563.04	—	316.91	246.13
	$1,876.53	$2,000.00	$668.93	$3,207.60

Financial Condition

Condensed balance sheets of the Association at November 30, 1949, and 1950 are compared below:

Assets	November 30 1949	 1950	Increase *Decrease*
Cash on deposit and on hand	$ 7,456	$ 16,035	$ 8,579
Receivables, net	3,422	3,144	278
Inventory of "Economic Essays"—at nominal value	1	—	*1*
Prepaid expenses	779	452	*327*
Furniture and fixtures, net	675	936	261
Investments at cost—			
Bonds	33,109	33,109	—
Stocks	48,427	51,979	3,552
	$93,869	$105,655	$11,786
Liabilities and Surplus			
Accounts payable	$ 6,080	$ 9,100	$ 3,020
Allied Social Science Associations	829	—	*829*
Deferred income	16,366	18,540	2,174
Membership extension fund	1,088	966	*122*
Fund for proposed secretariat	35	35	—
Committee funds appropriated (not expended)	1,877	3,208	1,331
Life memberships	4,325	5,200	875
Surplus—			
Balance at beginning of period	58,219	63,269	5,050
Net income for period	4,950	5,112	162
Transfers from life memberships	100	225	125
	$93,869	$105,655	$11,786

Cash on deposit was satisfactorily reconciled with balances confirmed directly to us by the depositories.

The receivables of the Association were not confirmed by correspondence with debtors. Based upon the Association's past experience the reserve for doubtful accounts appears to be adequate to cover normal losses.

Changes in the investment account were verified by the examination of broker's invoices and other supporting data. Securities held were confirmed directly to us by the State Bank and Trust Company of Evanston, Illinois, custodian for the Association.

Insofar as we were able to ascertain, all liabilities of the Association at November 30, 1950, are reflected in the accompanying balance sheet and the Secretary has represented to us that to the best of his knowledge all liabilities are disclosed.

We wish to take this opportunity to express our appreciation of the courtesies and co-operation extended to our representatives during the course of the examination.

Very truly yours,

DAVID HIMMELBLAU AND CO.
Certified Public Accountants

BALANCE SHEET—NOVEMBER 30,1950

Assets

CURRENT ASSETS		
Cash on deposit and on hand—		
State Bank and Trust Company, Evanston	$14,165.92	
National Bank of Commerce of Chicago	1,844.45	
Petty cash	25.00	$ 16,035.37
Receivables—		
Review advertising	$ 1,906.70	
Interest accrued on bonds	448.33	
Publication sales	315.20	
Membership dues	740.00	
Sundry	135.15	
Total receivables	$ 3,545.37	
Less—Reserve for doubtful accounts	401.52	3,143.85
Inventory of stamps and envelopes		204.58
Unexpired insurance		247.49
Total current assets		$ 19,631.29
INVESTMENTS (at cost):		
Bonds	$33,108.63	
Stocks	51,978.53	85,087.16
FURNITURE AND FIXTURES (less reserve for depreciation)		936.50
Total assets		$105,654.95

Liabilities, Funds and Surplus

CURRENT LIABILITIES:			
Accounts payable			$ 9,100.23
DEFERRED INCOME:			
Prepaid subscriptions		$ 5,810.92	
Prepaid dues		12,728.80	18,539.72
MEMBERSHIP EXTENSION FUND			966.36
FUND FOR PROPOSED PERMANENT SECRETARIAT			35.00
COMMITTEE FUNDS APPROPRIATED (not expended)			3,207.60
LIFE MEMBERSHIPS AND SURPLUS:			
Life memberships		$ 5,200.00	
Unappropriated surplus—			
Balance November 30, 1949	$63,268.85		
Life membership transfers	225.00		
	$63,493.85		
Net income for year ended November 30, 1950 (Exhibit 2)	5,112.19	68,606.04	73,806.04
Total liabilities, funds and surplus			$105,654.95

AUDITORS' CERTIFICATE

Executive Committee
American Economic Association:

We have examined the balance sheet of American Economic Association as of November 30, 1950 and the related statement of income and expense for the year then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records, and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the accompanying balance sheet and statement of income and expense present fairly the financial position of American Economic Association at November 30, 1950 and the results of its operations for the year then ended, in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

DAVID HIMMELBLAU & CO.
Certified Public Accountants

December 15, 1950
Chicago, Illinois

EXHIBIT 2

AMERICAN ECONOMIC ASSOCIATION
STATEMENT OF INCOME AND EXPENSES
FOR YEAR ENDED NOVEMBER 30, 1950

Particulars			Amount	
INCOME:				
Dues—				
Regular, junior and family members			$37,862.11	
Subscribing and contributing members			600.00	$38,462.11
Investments—				
Interest on bonds			$ 1,117.50	
Dividends			3,860.39	
			$ 4,977.89	
Less—Custodian fees			131.26	4,846.63
Total income				$43,308.74
EXPENSES:				
Administrative and other operating expenses—				
Secretary's salary		$ 2,500.00		
Office salaries		9,336.89		
Annual meeting (net)		*430.58*		
Executive committee expenses		1,146.47		
Other committee expenses		523.49		
American Economic Review moving expenses		715.77		
Postage expense		794.58		
Stationery and supplies		1,039.16		
Insurance		177.90		
President's expense		205.97		
Provision for depreciation		119.74		
Telephone and telegraph		101.77		
American Council of Learned Societies—dues and expense		219.20		
Exchange on checks		56.87		
Miscellaneous (net)		*105.59*	$16,401.64	
Publication expenses—				
Printing of:				
Review		$24,518.69		
Directory and handbook		1,163.84		
Proceedings		9,684.76		
Editor's honorarium		2,500.00		
Payments to contributors		1,573.35		
Editorial clerical salaries		4,975.26		
Editorial supplies and expense		638.86		
Sundry publishing expense		*75.60*		
Total publishing expenses		$44,979.16		
Less—Publication income:				
Subscriptions, other than members	$14,272.56			
Sales of copies	2,863.19			
Advertising	8,048.50	25,184.25	19,794.91	
Total expenses				36,196.55
NET OPERATING INCOME				$ 7,112.19
ADDITIONAL APPROPRIATIONS:				
Committee on Research				2,000.00
Net income for year ended November 30, 1950 (Exhibit 1)				$ 5,112.19

REPORT OF THE MANAGING EDITOR FOR THE YEAR ENDING DECEMBER, 1950

The most general comment to be made about the contents of the *Review* for the past year is of much the same sort as for other recent years, that they show a creditable level without attaining great intellectual distinction, except in rare instances. This is a comment which is perhaps hardly worth making in the future, on the general ground that simple competence is all that is to be expected in journal articles and that in any case distinguished intellectual performance is rare. Taken in conjunction with the contents of other journals, the contents of the *Review* demonstrate that there is throughout the profession a state of active and intelligent discussion of important problems of analysis and policy, and that little space is devoted to barren discussion.

An analysis of the contents shows, as in other recent years, a degree of concentration on matters connected with the problem of economic stability. Lesser concentration occurs in the fields of general theory and international economic relations. Beyond this the contributions were scattered pretty well across the spectrum of economists' interests. These results are not the result of either editorial policy or editorial bias. They are simply the end product of the whole process of qualitative editorial appraisal in which the members of the Board of Editors play a large part. One has, however, to be constantly on guard against the bias of editorial interest and has also to think of giving constructive editorial encouragement to writings in fields which appear to be undergoing neglect.

The rate at which manuscripts are received maintains a remarkable annual stability. The total number received in 1950 was 197 as compared with 200 in 1949 and 205 in 1948. Of the 156 in 1950 of a length and character to be regarded as leading articles, 29 were published, or 19 per cent. I should judge that there had been some improvement in the average quality of manuscripts received. At any rate, it has been necessary to reject a number of manuscripts which I should gladly have published, and there have been other years in which this was not so. This is no doubt evidence of the crescendo of intellectual effort after the interruption of the war.

A statistical summary of the contents of the *Review* in 1950 with corresponding figures for 1949 is presented below, omitting the advertising pages and exclusive of the *Proceedings*.

	1950		1949	
	No.	Pages	No.	Pages
Leading articles	29	500	29	471
Communications	24	69	24	72
Book reviews	130	258	144	320
Memorials	2	22	3	24
Classified list of new books		64		60
Classified list of periodical articles		37		36
Classified list of dissertations		40		34
Notes		26		37
		1,016		1,054

For the year, the total number of pages was 38 less than in 1949 and 16 pages more than the estimated 1,000 upon which publication estimates were based. Articles, communications, and book reviews were contributed by 166 persons as compared with 188 in 1949.

In the reviewing department, the general quality has, it seems to me, been well maintained, though one is never satisfied. There are two problems in this department which have not been satisfactorily solved. One is arrangement for book notes much shorter than conventional reviews. The other is adequate coverage of important public documents which do not flow automatically to the editorial desk.

In the bibliographical department, assistance has been received during the past year from the Legislative Reference Service of the Library of Congress, and over a number of years the Library of the Bureau of the Budget has provided invaluable assistance, especially in the coverage of public documents, through the courtesy of making its classified bibliography of current publications available. I wish to express my sincere thanks to both agencies.

Expenditures in 1950 exceeded those in 1949 by $611.82. The actual cost for 1950 exceeded the budget estimate by $831.03. For the sum of all items except the cost of printing and mailing actual costs were almost precisely equal to the budget estimate.

The excess of actual expenditures is partly accounted for by the number of copies printed above the 9,800 used for estimating purposes. The added expense on this account is roughly $350. An additional $40 was due to a paper surcharge. Most of the remainder is due to high mailing charges for the December number due to the inclusion of a supplement. Finally, a small amount is due to the pages printed in excess of the estimated 1,000.

The following table presents the actual expenditures in 1950 in comparison with the estimated budget and with actual expenditures in 1949.

	Budget 1950	Actual 1950	Actual 1949
Printing and mailing	$20,000.00	$20,833.68*	$20,377.33†
Editorial	2,500.00	2,500.00	2,500.00
Editorial assistance	5,000.00	5,071.63	4,896.91
Supplies	500.00	602.37	528.22
Contributors	1,750.00	1,573.35	1,666.75
	$29,750.00	$30,581.03	$29,969.21

* Cost of December number estimated.
† Corrected from 1949 Annual Report.

The number of copies printed rose from 9,800 copies in December, 1949, to 10,200 copies in December, 1950. The number of copies printed and the cost of printing are shown by quarters in the following table.

	Copies Printed	Pages Net	Pages Gross	Cost*
March	10,050	266	312	$5,358.87
June	10,150	234	376	4,735.77
September	10,150	284	312	5,365.75
December	10,200	232	280	5,290.00
Foreign mailing wrappers				83.29

* Cost of December number estimated.

The estimated costs for the coming year presented below are based upon the number of 10,200 printed in December. Since the number of copies has been steadily rising, the estimated cost is a minimum which will be exceeded to the extent that the printings continue to increase. As in the past the proposed budget for 1950 is based on an annual volume of 1,000 pages net of advertising and upon present costs. This budget is $500 above the budget for 1950 but more than $300 below the actual cost for 1950.

The recommended budget for 1950 is presented below.

Printing (paper, postage, reprints, etc.)	$20,500
Editor's salary	2,500
Editorial assistance	5,000
Supplies	500
Contributors	1,750
	$30,250

During the course of the year, the exchange list was carefully scrutinized, and 29 domestic exchanges and 9 foreign exchanges were canceled. At the same time, 11 foreign exchanges and one complimentary subscription were added.

One matter not heretofore mentioned in earlier reports is perhaps worthy of notice. After assigning books to reviewers, there is a substantial residue of books and also of exchange periodicals and other documents. A few of the important economic journals are retained in permanent files. It has been the practice to turn the remainder of the materials over to the economics departments and libraries of the institutions which have provided office space, except for a period when a number of foreign language journals went to the Library of Congress.

The terms of G. J. Stigler and F. H. Harbison as members of the Board of Editors expire at the end of 1950 and it will be necessary for the Committee to appoint successors. The continuing members are William Fellner, Moses Abramovitz, R. A. Musgrave and W. H. Nicholls. I hope that it will be appreciated what time-consuming services all these members have unstintingly contributed to the *Review*. They are the essential underpinnings of the present editorial system.

With the removal of the editorial office to Los Angeles, the University of California has been kind enough to provide an office. To the George Washington University, where the *Review* was housed for several years, and especially to the members of its Department of Economics, I wish to express thanks for endless courtesies.

Respectfully submitted,
PAUL T. HOMAN, *Managing Editor*

REPORT OF THE COMMITTEE ON PUBLICATIONS

Sales of four volumes of reprinted articles published by The Blakiston Company, under contract with the Association, continue to indicate a sustained interest by the profession in these publications. A total of 5,180 copies of Volume I (*Readings in the Social Control of Industry*) has been sold as of October 31, 1950. Sales of Volume II (*Readings in Business Cycle Theory*) amounted to 2,070 copies during the year ending October 31, 1950, bringing the total sales up to 8,726 copies. Total sales of Volume III (*Readings in the Theory of Income Distribution*) amounted to 6,711 copies, and those of Volume IV (*Readings in the Theory of International Trade*) were 4,616 copies. According to the terms of the contract, no final settlement is to be made between the publishers and the Association before all the books are sold. The publishers, however, have so far advanced $2,000 to the Association and have again offered to advance another $1,000 this year, or a larger sum, if the Association deems it advisable.

Three further volumes are in process of preparation. The volume on monetary theory, edited by Friedrich A. Lutz and Lloyd A. Mints, will appear early in the spring of 1951. The volume on price theory, edited by K. E. Boulding and G. J. Stigler, should appear by the end of 1951. The preparation of the volume on public finance and fiscal policy, which was to be edited by Roy Blough and Arthur Smithies, was held up because Roy Blough resigned as editor when he accepted an assignment in Washington. Keith Butters has been appointed as his successor.

No decisions have yet been taken on further volumes in the series.

The Committee would appreciate suggestions as to the topics which further volumes should cover.

Respectfully submitted,

Friedrich A. Lutz

REPORT OF THE COMMITTEE ON GRADUATE TRAINING IN ECONOMICS

At the April Executive Committee meeting, held in Princeton, a resolution was passed providing for an exploratory committee on graduate training in economics. In accordance with this resolution, a committee consisting of the undersigned was formed. It has carried on substantial correspondence and has held one all-day meeting. As a result of its deliberations, the following report has been prepared and adopted unanimously.

General Recommendation. We strongly recommend that the American Economic Association sponsor a study of graduate training in economics. Such a study is needed. If carried out successfully, published, and widely discussed, it could contribute substantially to the improvement of graduate training in economics. The Association has a definite professional responsibility in this field.

Organization of the Study. In our judgment, the study should be carried out under the auspices of a small committee of five to ten persons—preferably not more than seven. These persons should be chosen for their recognized competence, their breadth of outlook, their high standards, their forward-looking orientation, and their willingness to take definite and firm positions. We believe that such a committee should not be selected merely to achieve broad representation of all points of view and of all interests. A place on the committee might be provided for one or more individuals whose point of view departs from the typical or the traditional. The chairman should be thought of as a key person in the study, and should be able to devote considerable time and thought to it. At first, we inclined to the view that the chairman should be asked to devote full time to the study for six months or a year and should be paid accordingly. Recognizing that this plan may not conform to the traditions and policies of the Association, we suggest as an alternative that the committee be authorized to employ a paid secretary, either part-time or full-time, who would devote himself to the study under the direction of the chairman. The secretary should probably be a younger man of sufficient experience in the field to be able to make an effective contribution.

The committee should feel free to call on consultants, including deans of graduate schools, staff members of foundations, members of the Civil Service Commission, other employers of economists, the Social Science Research Council, and members of the Association.

The study should be completed and published in not more than two years.

Relation of the Association to the Study. In view of our recommendations regarding the selection of the committee and the organization of the study, we believe that the Association should not expect to give formal approval to the study or to the recommendations contained therein. Rather, it should serve as sponsor of the study, it should receive the report and, having satisfied itself that the report is worthy of publication, publish it. Under this plan, the Association would be relieved of the responsibility of achieving broad representation in the membership of the committee; the necessity for effecting compromises among many different views (thus diluting the report) would be avoided; the Association would not be in the position of criticizing, by implication, the graduate program of any university; and the Association would not be put in the position of tacitly attempting to impose standards. In short, our view is that a better and more effective report will be possible if the objective is an imaginative and forceful document rather than a report of which every one approves. On the other hand, we believe that careful selection of the committee, according to the above specifications, will result in a reasoned and responsible report.

Cost. We estimate that a budget of about $11,500 would be desirable. This would be divided as follows:

Salary of secretary (or chairman)	$ 7,000
Secretarial assistance and supplies	1,000
Travel and meetings	1,500
Publication	2,000
	$11,500

In case publication could be arranged in the *Review,* the $2,000 item for publication could be deleted.

Objectives of Study. We believe that the study is needed because graduate training in economics is unsatisfactory in important respects even at the very best institutions. The purposes of the study should be to clarify objectives, to provide facts about current practices, to develop standards of good practice, and to point the way generally toward solid improvement in the substance and form of graduate training. In following these purposes, the study would not seek to eliminate diversity in the graduate programs of various institutions. It might, however, formulate minimal standards and define the minimal conditions which an institution should meet before offering graduate training at various levels. The study should provide information and principles against which the faculties of individual institutions might submit their own programs to helpful self-criticism. We believe that the study should not proceed on the assumption that improvement in graduate training is to be sought chiefly among the "lesser" institutions. We believe that improvement is possible in the institutions of highest reputation; they are the institutions which are, in fact, training most of the graduate students in economics; therefore, the study should be concerned with them as well as with the "lesser" institutions.

We believe that special attention should be given to the graduate programs in economics leading to the M.A. The significance and purpose of this degree have become highly ambiguous. Thorough consideration of it would be most useful.

Possible Topics to be Studied. A list of specific topics which we feel to be worthy of study are suggested in the following outline. Each topic refers both to the M.A. and the Ph.D. programs.

1. The objectives of graduate study in economics.
   - *a*) Development of the student's capacity to think constructively in economics, to grow, to adjust to new developments in the field.
   - *b*) Intellectual and substantive content.

- *c*) Impact on the student as a person and as a citizen.
- *d*) Employment objectives.
  - (1) Desirable qualities for persons entering various occupations for which economic training is preparatory. (A survey of, or consultation with, employers of economists would be helpful.)
  - (2) Trends in career opportunities for economists.
  - (3) Objectives for particular vocations.
    - (*a*) Teaching: secondary schools, colleges.
    - (*b*) Research: universities, government, business, other.
    - (*c*) Administration: education, government, business, other.

2. Selection of students.
   - *a*) Definition of the qualities of individual students which are associated with success.
   - *b*) Recruitment of promising students.
   - *c*) Improvement in the college preparation of students who undertake graduate study in economics—with special reference to the "tool subjects."
   - *d*) Admission requirements.
   - *e*) Discouragement or elimination of unqualified students before admission or during the graduate course.
3. Subject matter.
   - *a*) Important tools; e.g., mathematics, accounting, statistics, history, logic, scientific method, and foreign language.
   - *b*) Desirable preparation in related fields of social sciences, psychology, and law.
   - *c*) Essential fundamentals of economics.
   - *d*) Role of economic policy and problems and their relation to theory.
   - *e*) Number of courses and fields.
   - *f*) Instruction and experience in research: function of the thesis.
   - *g*) Instruction and experience in teaching.
4. Methods, procedures, and facilities.
   - *a*) Survey of practices in graduate schools with emphasis on the more subtle nonformal facts rather than on the formal facts that are contained in college bulletins.
   - *b*) Methods of instruction: systematic courses versus seminars and individual study; relationship of student and staff; character of thesis supervision; publication of thesis.
   - *c*) Character of examinations, examination procedures, and standards of grading students.
   - *d*) Quality of graduate teaching staff.
   - *e*) Research facilities and opportunities for staff and students.
   - *f*) Financial support of graduate training.
5. Standards.
   - *a*) Survey of opinions of leaders in graduate training.
   - *b*) Survey of employers of economists.
   - *c*) General statement of the content and specifications of a good graduate program in economics at various levels.

Final Statement. We repeat our conclusion that the proposed study of graduate training in economics would be a useful undertaking for the American Economic Association. If there is any way in which we can help to facilitate the study, please feel free to call on us.

Respectfully submitted,

HOWARD R. BOWEN, *Chairman*
G. L. BACH
GALE JOHNSON
I. L. SHARFMAN

REPORT OF THE COMMITTEE ON INTERNATIONAL CO-OPERATION: THE I.E.A.

Report on Monte Carlo Conference

The first constituent meeting of the Council of the I.E.A. took place as planned from September 10 to 13, 1950, and at the same time and place a round table discussion on the problem of long-run international balance was held. The meeting was attended by about sixty economists from twelve countries. A list of participants and of the participating national associations as well as a copy of the agenda and list of submitted paper is attached.[1] The A.E.A. was represented by Professors Van Sickle and Haberler and by Mr. Lary who had been appointed alternate for Professor Ellis who was unable to attend. Professor Leontief, who had submitted a paper, also attended and took part in the discussion, as did Professor Abba Lerner who happened to be in the neighborhood.

Great Britain was represented by an especially strong delegation which clearly indicates the interest of the Royal Economic Society.

The statutes of the I.E.A. were thoroughly discussed and in a few places slightly amended. Nothing essential was changed. A copy of the definitive statutes is attached.[1]

The officers and Executive Committee of the I.E.A. were elected. The names are as follows: President, Professor Haberler; Vice President, Professor Leon Dupriez (Belgium); Treasurer, Professor Robinson (Great Britain). Other members of the Executive Committee are: Professor François Perroux (France); Professor Keilhau (Norway); and Professor Xenophon Zolotas (Greece). The I.E.A. has its headquarters in Paris (27, rue St. Guillaume, Paris 7^{e}) and its executive secretary is Dr. H. Berger-Lieser.

It was decided to keep the Executive Committee as small as possible for the sake of efficiency and economy, and because several important national associations are expected to join in the near future (e.g., the Italian, Indian, Australian, and possibly one or two Latin-American associations) which may make it necessary to enlarge the Committee.

The Council elected five Honorary Presidents: J. M. Clark (U.S.A.), Luigi Einaudi (Italy), E. Heckscher (Sweden), A. C. Pigou (U. K.), Charles Rist (France). All five gentlemen have accepted.

The Council had a thorough discussion of the financial status, financial prospects, and the policies and possible activities of the Association.

As to activities, it was decided to hold a round table conference late next summer on the general problem of "Monopoly and Competition with Special Reference to the Problem of Monopoly Control." The size of the conference will be held small; i.e., to about twenty-five participants. A program committee under the chairmanship of Professor Edward H. Chamberlin was appointed to take charge of the preparation, under the general supervision of the Executive Committee. This Committee has an American branch consisting of Mr. Corwin Edwards and Professor Fritz Machlup and a European branch consisting of a British, French, and Swedish representative. A copy of the latest report by Professor Chamberlin on the plans for the conference is attached.[1] Professor Chamberlin, who expects to be in Paris throughout the academic year 1950-51, has called a meeting of his Committee for the middle of December which will put the finishing touches to the program of the Conference.

---

[1] On file at the Secretary's Office.

It is possible that the the same time a smaller round table conference on the subject of "Comparative Methods of Teaching Economics" will be held. UNESCO has started a general project on teaching methods in the social sciences and has tentatively offered the I.E.A. a small grant in order to make a special study on this subject in economics. There was a thorough discussion in the Council of the I.E.A. and the conclusion was reached that the above-mentioned grant would be put to best use by selecting a small group of economists in various countries who are especially interested in the subject and ask them to prepare papers. This group will then be assembled in a round table to discuss their problems and possibly publish the country papers and a covering report.

Apart from the business meetings, four round table discussions were held on the problem of long-range international balance.

These round tables were based on about fifteen background papers which had been distributed in advance and will be published by UNESCO in their *Social Science Bulletin.* The discussion was very lively. A summary of the discussion has been prepared and will be published along with the papers.

Respectfully submitted,

GOTTFRIED HABERLER, *Chairman*

REPORT OF OUR REPRESENTATIVE ON THE SOCIAL SCIENCE RESEARCH COUNCIL

Because of the extent and variedness of the activities of the Social Science Research Council this past year, attention in this report will be given only to certain of the affairs of the Council which are of especial interest to the economics profession.

The resources of the Council have been increased by a grant of $60,000 per year over a five-year period from the newly established Ford Foundation, the grant to be used for the facilitation of the interchange of information, planning, and other co-operative functions in the field of "human behavior," conceived as the subject with which psychology, social anthropology, and sociology are most directly concerned. The Council has thus shared along with thirteen selected universities in the first disbursement of funds by this newly established foundation.

During the past year the Council had at its disposal some funds for the organization of interuniversity summer research seminars. The purpose of these seminars is to bring together from various institutions for a few weeks in the summer a number of young scholars interested in exploring carefully a field of common interest. Only such projects as appear well suited to carry out the purposes of the grant established for this purpose will receive support. The funds available are quite limited and the money allowance per man for a small number does not exceed what he might earn during a summer term of teaching. Last summer economists participated in an old age research seminar held at Berkeley. Economists also made up nearly the whole of a group at the University of Chicago engaged in inquiries into agricultural economics. Should several young economists be interested in exploring intensely (for say six weeks) some important subject in economics, such as the role of pressure groups, for example, they may draw up a proposal and submit it to the President of the Council for consideration.

It is the hope of those interested in area research that a larger number of economists will become interested in this approach, so important today in view of the Point Four and related programs. Economists not well informed concerning this work may secure Council Bulletin 63, *Area Research: Theory and Practice,* by Julian H. Steward. The most successful practitioners in this field are those who can combine a sound functional approach with detailed knowledge of some area, such as China, a part of Latin America, etc. It would be of much help to your representatives on the Council if all economists who have detailed knowledge of any area would communicate with the President of the Council and make known their interests, economic specialties, and areas of especial concern. It is not possible to glean this information from the Association's *Directory*. The combination of functional and area knowledge bids to become of increasing importance. Yet the false impression obtains that economists are not interested in this approach.

During the past year the work of the Committee on Economic Growth under the chairmanship of Professor Simon Kuznets has made much progress. This

Committee, together with a cognate group interested in technological development, will conduct a conference at Princeton this spring. It is believed that the papers being prepared for this conference will both give focus to research in this field and add considerably to our knowledge. The Committee is sponsoring a number of studies, all of which should add greatly to our knowledge of this largely neglected field of research.

The attention of the profession is called once again to the faculty research fellowships designed for promising young scholars under thirty-five years of age and intended to enable them to devote no more than half their time to teaching. The number of these fellowships is very small. Their conditions have been stated in announcements which have been distributed widely among university administrators and other responsible university personnel.

A committee on census monographs was established this past year, with the cordial acquiescence of the Bureau of the Census. This Committee is engaged in assembling suitable monograph subjects to be based upon census data. Should members of our Association have in mind subjects they believe both important and suitable in view of census data and classifications, these subjects may be suggested to the President of the Council for communication to the Committee. These monographs formerly were an important source of information, but little along this line has been done in recent years.

Relative to Council committees these facts should be noted. The Committee on Economic History has been organized as a separate legal entity. The report of the Committee on Historiography—a report that will be of interest to most economists—will appear soon. A report is expected soon from the joint Committee on Measurement of Opinion, Attitudes, and Consumer Wants. It is likely that further research in the field of problems connected with aging will be sponsored by the Council. As was noted in earlier reports, the projects the Committees on Labor Market Research and Housing have under way are of special interest to economists. Last June the Committee on Organization for Research issued a *Directory of Social Science Research Organizations in Universities and Colleges;* it is preparing a handbook on problems of research organization in universities. Attention should be called also to the Russell Sage Foundation pamphlet, *Effective Use of Social Science Research in the Federal Service,* a contribution which indicates opportunities for developing relations between social science and government. Studies are under way of financial aid for the individual scholar and of the problems involved in the recruitment of outstanding personnel for social science. Inquiries on matters referred to in this report may be directed to the President, Social Science Research Council, 230 Park Avenue, New York.

Respectfully submitted,

JOSEPH J. SPENGLER

REPORT OF OUR REPRESENTATIVE ON THE BOARD OF THE NATIONAL BUREAU OF ECONOMIC RESEARCH

During 1950 the National Bureau continued its program of basic economic research to produce findings of central importance for a foundation of economically tested facts useful for further research and for policy decisions. Ten reports were published during the year, five others were in press at the end of the year, and twenty-seven manuscripts were in an advanced stage of preparation. Several new studies were also projected.

Titles of the books and occasional papers published during the year are:

BOOKS

Taxable and Business Income, by Dan T. Smith and J. Keith Butters

Studies in Income and Wealth, Volume Twelve, by Conference on Research in Income and Wealth

Urban Mortgage Lending by Life Insurance Companies, by R. J. Saulnier

The Impact of Government on Real Estate Finance in the United States, by Miles Colean

Inventories and Business Cycles, with Special Reference to Manufacturers' Inventories, by Moses Abramovitz

OCCASIONAL PAPERS

31 *Statistical Indicators of Cyclical Revivals and Recessions*, by Geoffrey H. Moore

32 *Cyclical Diversities in the Fortunes of Industrial Corporations*, by Thor Hultgren

33 *Employment and Compensation in Education*, by George J. Stigler

34 *Behavior of Wage Rates during Business Cycles*, by Daniel Creamer

35 *Shares of Upper Income Groups in Income and Savings*, by Simon Kuznets

One of the books in preparation at the end of the year is *What Happens during Business Cycles*, by Wesley C. Mitchell. This book explains the National Bureau's objectives in undertaking its comprehensive investigation of business cycles; sets forth its basic concepts and methods of measurement; describes and explains the great variety of cyclical fluctuations characteristic of economic activities; and gives a composite picture of business cycles based on empirical observations covering every branch of economic life.

Studies in an advanced stage of preparation, many of which will be issued during the current year, include: five in business cycles; three in income and the flow of money; three in employment, productivity, and the labor market; four in urban real estate finance; three in agricultural finance; six in corporate finance and consumer credit; and three in public finance.

New studies now well under way include a broad study of the capital requirements of the American economy, started in 1949-50 under the direction of Simon Kuznets, Lawrence Klein's study of consumption patterns, and a study of the role of capital flows in maintaining equilibrium in the international balance of payments, by Penelope C. Hartland.

7. Plans for fiscal research have been further developed, and some new work has been started. The statistical history of the personal income tax, on which Lawrence H. Seltzer has been working, was broadened by the addition of a parallel study of the corporate income tax by Sergei Dobrovolsky. Daniel Holland is attempting to link statistically the corporate and personal income taxes by fitting corporate earnings into a personal distribution of taxable income. George E. Lent is making a study of the changing volume, distribution of ownership, and economic effects of tax exempt securities. John M. Firestone has begun a study of federal revenues in business cycles.

Thomas R. Atkinson has started a new study of individual financial investment in relation to income, undertaken in co-operation with the University of Wisconsin.

Plans have recently been completed for a study of government lending, loan insurance, and loan guarantees, to be undertaken with the support of a grant from the Association of Reserve City Bankers. This study will cover the present magnitude of government financial aid *in toto* and in various segments of the economy, compared with financing supplied by banks and other private agencies; growth of government financing activities in the past few decades; kinds of government financial services; the credit experience of federal financing agencies; and the impact of federal financing on the economic system.

The first meeting of the reorganized Universities-National Bureau Committee for Economic Research was held in June, 1950.

The third special conference under the auspices of this Committee, on research in business finance, was held June 19-21, 1950. Papers prepared for this conference and for the preceding conference on research in business cycles held in November, 1949, are now being prepared for publication. During the past year a planning committee has been developing a program for another special conference, to treat regularization of private business investment, to be held in November, 1951.

Thomas R. Atkinson, University of Wisconsin, John M. Firestone, College of the City of New York, and Penelope C. Hartland, Brown University, were research associates in 1950-51. Lawrence R. Klein continued as research associate under a joint arrangement with the Survey Research Center of the University of Michigan.

The undersigned, a member of the Board of Directors of the National Bureau on nomination of the Association, will be happy to receive from members of the Association any comments or suggestions relating to the work of the National Bureau.

Respectfully submitted,
DONALD H. WALLACE

PUBLICATIONS

OF THE

AMERICAN ECONOMIC ASSOCIATION

1951

FIRST SERIES

Numbers starred are sold only with the sets; the supply of those double starred is exhausted. For information apply to the Secretary.

Volume I, 1886

		Price in paper
1.	Report of Organization of the American Economic Association. Pp. 46	$ .50
2-3.	** Relation of the Modern Municipality to the Gas Supply. By E. J. James. Pp. 66.	.75
4.	Co-operation in a Western City. By Albert Shaw. Pp. 106	.75
5.	** Co-operation in New England. By E. W. Bemis. Pp. 136.	.75
6.	** Relation of the State to Industrial Action. By H. C. Adams. Pp. 85.	.75

Volume II, 1887

1.	Three Phases of Co-operation in the West. By Amos G. Warner. Pp. 119.	.75
2.	Historical Sketch of the Finance of Pennsylvania. By T. K. Worthington. Pp. 106.	.75
3.	The Railway Question. By Edmund J. James. Pp. 68.	.75
4.	** Early History of the English Woolen Industry. By W. J. Ashley. Pp. 85.	.75
5.	** Mediæval Guilds of England. By E. R. A. Seligman. Pp. 113.	.75
6.	Relation of Modern Municipalities to Quasi-public Works. By H. C. Adams and others. Pp 87.	.75

Volume III, 1888

1.	Statistics in College, by C. D. Wright; Sociology and Political Economy, by F. H. Giddings; The Legal-Tender Decisions, by E. J. James. Pp. 80.	.75
2.	Capital and Its Earnings. By John B. Clark. Pp. 69.	.75
3.	The Manual Laboring Class, by F. A. Walker; Mine Labor in the Hocking Valley, by E. W. Bemis; Report of the Second Annual Meeting. Pp. 86.	.75
4-5.	** Statistics and Economics. By Richmond Mayo-Smith. Pp. 127.	1.00
6.	The Stability of Prices. By Simon N. Patten. Pp. 64.	.75

Volume IV, 1889

1.	Contributions to the Wages Question: The Theory of Wages, by Stuart Wood; Possibility of a Scientific Law of Wages, by J. B. Clark. Pp. 69.	.75
2.	Socialism in England. By Sidney Webb. Pp. 73.	.75
3.	Road Legislation for the American State. By J. W. Jenks. Pp. 83.	.75
4.	Third Annual Meeting: Report of the Proceedings. Pp. 123.	.75
5.	**Malthus and Ricardo, by S. N. Patten; The Study of Statistics, by D. R. Dewey; Analysis in Political Economy, by W. W. Folwell. Pp. 69.	.75
6.	An Honest Dollar. By E. Benjamin Andrews. Pp. 50.	.50

Volume V, 1890

1.	The Industrial Transition in Japan. By Yeijiro Ono. Pp. 122.	$1.00
2.	Two Essays on Child-Labor. By W. F. Willoughby and Clare de Graffenried. Pp. 150.	.75
3-4.	Papers on the Canal Question. By E. J. James and L. M. Haupt. Pp. 85.	1.00
5.	History of the New York Property Tax. By J. C. Schwab. Pp. 108.	1.00
6.	Educational Value of Political Economy. By S. N. Patten. Pp. 36.	.75

Volume VI, 1891

1-2.	Fourth Annual Meeting: Reports, Papers, Discussions.	1.00
3.	Government Forestry. Papers by Pinchot, Bowers, and Fernow. Pp. 102.	.75
4-5.	Municipal Ownership of Gas in the U.S. By E. W. Bemis. Pp. 185.	1.00
6.	State Railroad Commissions. By F. C. Clark. Pp 110.	.75

Volume VII, 1892

1.	** The Silver Situation in the United States. By F. W. Taussig. Pp. 118.	.75
2-3.	** Shifting and Incidence of Taxation. By E. R. A. Seligman. Pp. 424. (Revised.)	2.00
4-5.	Sinking Funds. By Edward A. Ross. Pp. 106.	1.00
6.	The Reciprocity Treaty with Canada of 1854. By F. E. Haynes. Pp. 70.	.75

Volume VIII, 1893

1.	Fifth Annual Meeting: Report of the Proceedings. Pp. 130.	.75
2-3.	Housing of the Poor in American Cities. By M. T. Reynolds. Pp. 132.	1.00
4-5.	Public Assistance of the Poor in France. By E. G. Balch. Pp. 180.	1.00
6.	First Stages of the Tariff Policy of the U.S. By William Hill. Pp. 162.	1.00

Volume IX, 1894

	Sixth Annual Meeting: Handbook and Report. Pp. 73.	.50
1-2.	** Progressive Taxation in Theory and Practice. By Edwin R. A. Seligman. Pp. 222. *(See 1908, No. 4.)*	1.00
3.	** The Theory of Transportation. By C. H. Cooley. Pp. 148.	.75
4.	Sir William Petty. By Wilson Lloyd Bevan. Pp. 102.	.75
5-6.	Papers on Labor Problems. By J. B. Clark, C. D. Wright, D. R. Dewey, A. T. Hadley, and J. G. Brooks. Pp. 94.	.75

Volume X, 1895

	Seventh Annual Meeting: Handbook and Report. Pp. 183.	.50
1-3.	** The Canadian Banking System, 1817-1890. By R. M. Breckenridge. Pp. 478.	1.50
4.	Poor Laws of Massachusetts and New York. By John Cummings. Pp. 136.	.75
5-6.	Letters of Ricardo to McCulloch, 1816-1823. Edited by J. H. Hollander. Pp. 204. *(In cloth, only.)*	1.75

Volume XI, 1896

1-3.	** Race Traits and Tendencies of the American Negro. By F. L. Hoffman. Pp. 330.	1.25
4.	Appreciation and Interest. By Irving Fisher. Pp. 110.	.75
	* General Index to Volumes I-XI (1886-1896).	.25

ECONOMIC STUDIES

($2.50 per volume)

Volume I, 1896

	Eighth Annual Meeting: Handbook and Report. Pp. 78.	.50
1.	The Theory of Economic Progress, by J. B. Clark; The Relation of Changes in the Volume of the Currency to Prosperity, by F. A. Walker. Pp. 46.	.50
2.	The Adjustment of Wages to Efficiency. Three Papers: Gain Sharing, by H. R. Towne; The Premium Plan, by F. A. Halsey; A Piece-Rate System, by F. W. Taylor. Pp. 83.	.50
3.	** The Populist Movement. By Frank L. McVey. Pp. 81.	.50
4.	The Present Monetary Situation. By W. Lexis; translated by John Cummings. Pp. 72.	.50
5-6.	The Street Railway Problem in Cleveland. By W. R. Hopkins. Pp. 94.	.75

Volume II, 1897

	Ninth Annual Meeting: Handbook and Report. Pp. 162.	$ .50
1.	Economics and Jurisprudence. By Henry C. Adams. Pp. 48.	.50
2.	The Saloon Question in Chicago. By John E. George. Pp. 62.	.50
3.	The General Property Tax in California. By C. C. Plehn. Pp. 88.	.50
4.	Area and Population of the United States at the Eleventh Census. By W. F. Willcox. Pp. 60.	.50
5.	A Discussion Concerning the Currencies of the British Plantations in America, etc. By William Douglass. Edited by C. J. Bullock. Pp. 228.	.50
6.	Density and Distribution of Population in the United States at the Eleventh Census. By W. F. Willcox. Pp. 79.	.50

Volume III, 1898

	Tenth Annual Meeting: Handbook and Report. Pp. 136.	.50
1.	Government by Injunction. By William H. Dunbar. Pp. 44.	.50
2.	Economic Aspects of Railroad Receiverships. By H. H. Swain. Pp. 118.	.50
3.	The Ohio Tax Inquisitor Law. By T. N. Carver. Pp. 50.	.50
4.	The American Federation of Labor. By Morton A. Aldrich. Pp. 54.	.50
5.	Housing of the Working People in Yonkers. By E. L. Bogart. Pp. 82.	.50
6.	The State Purchase of Railways in Switzerland. By Horace Michelie; translated by John Cummings. Pp. 72.	.50

Volume IV, 1899

	Eleventh Annual Meeting: Handbook and Report. Pp. 126.	.50
1.	I. Economics and Politics. By A. T. Hadley. II. Report on Currency Reform. III. Report on the Twelfth Census. Pp. 70.	.50
2.	Personal Competition. By Charles H. Cooley. Pp. 104.	.50
3.	Economics as a School Study. By F. R. Clow. Pp. 72.	.50
4-5.	The English Income Tax. By J. A. Hill. Pp. 162.	1.00
6.	** Effects of Recent Changes in Monetary Standards upon the Distribution of Wealth. By F. S. Kinder. Pp. 91.	.50

NEW SERIES

1.	** The Cotton Industry. By M. B. Hammond. Pp. 382.	1.50
2.	Scope and Method of the Twelfth Census. Critical discussion by over twenty statistical experts. Pp. 625.	2.00

THIRD SERIES

Note—During 1896-1899 the Association issued its publications in two series, viz., the bimonthly Economic Studies, *and the "New Series" of larger monographs printed at irregular intervals. In 1900 it reverted to the policy of issuing its monographs, now called the "Third Series" of the publications at quarterly intervals.*

Price per volume, $4.00.

Volume I, 1900

1.	Twelfth Annual Meeting: Papers on Economic Theory and Political Morality; Trusts; Railroad Problems; Public Finance; Consumers' League; Twelfth Census. Pp. 186.	1.00
2.	** The End of Villeinage in England. By T. W. Page. Pp. 99.	1.00
3.	Essays in Colonial Finance. By Members of the Association. Pp. 303.	1.50
4.	** Currency and Banking in the Province of Massachusetts Bay. By A. McF. Davis. Part I: Currency. Pp. 464 + 91 photogravure plates.	1.75

Volume II, 1901

1.	** Thirteenth Annual Meeting: Papers on Competition; Commercial Education; Economic Theory; Taxation of Quasi-public Corporations; Municipal Accounts. Pp. 300.	1.25
2.	Currency and Banking. By A. McF. Davis. Part II: Banking. Pp. 341 + 18 photogravure plates.	1.75
3.	** Theory of Value before Adam Smith. By Hannah R. Sewall. Pp. 132.	1.00
4.	Administration of City Finances in the U.S. By F. R. Clow. Pp. 144.	1.00

Volume III, 1902

1.	Fourteenth Annual Meeting: Papers on International Trade; Industrial Policy; Public Finance; Protective Tariff; Negro Problem; Arbitration of Labor Disputes in Coal Mining Industry; Porto Rican Finance; Economic History. Pp. 400.	$1.50
2.	** The Negro in Africa and America. By Joseph A. Tillinghast. Pp. 240.	1.25
3.	Taxation in New Hampshire. By M. H. Robinson. Pp. 232.	1.25
4.	** Rent in Modern Economic Theory. By Alvin S. Johnson. Pp. 136.	.75

Volume IV, 1903

1.	Fifteenth Annual Meeting: Papers and Discussions on Economic and Social Progress; Trade Unions and the Open Shop; Railway Regulation; Theory of Wages; Theory of Rent; Oriental Currency Problem. Pp. 298.	1.25
2.	Ethnic Factors in the Population of Boston. By F. A. Bushee. Pp. 171.	1.00
3.	History of Contract Labor in the Hawaiian Islands. By Catharine Coman. Pp. 74.	.75
4.	** The Income Tax in the Commonwealth of the United States. By Delos O. Kinsman. Pp. 134.	1.00

Volume V, 1904

	Sixteenth Annual Meeting. Papers and Proceedings published in two parts.	
1.	Part I—Papers and Discussions on Southern Agricultural and Industrial Problems; Social Aspects of Economic Law; Relations between Rent and Interest. Pp. 240.	1.00
2.	Part II—Papers and Discussion on The Management of the Surplus Reserve; Theory of Loan Credit in Relation to Corporation Economics; State Taxation of Interstate Commerce; Trusts; Theory of Social Causation. Pp. 203.	1.00
3.	Monopolistic Combinations in the German Coal Industry. By Francis Walker. Pp. 340.	1.25
4.	** The Influence of Farm Machinery on Production and Labor. By Hadley Winfield Quaintance. Pp. 110.	.75

Volume VI, 1905

	Seventeenth Annual Meeting. Papers and Proceedings published in two parts.	
1.	Part I—Papers and Discussions on the Doctrine of Free Trade; Theory of Prices; Theory of Money; Open Shop or Closed Shop. Pp. 226.	1.00
2.	Part II—Papers and Discussions on Government Interference with Industrial Combinations; Regulation of Railway Rates; Taxation of Railways; Preferential Tariffs and Reciprocity; Inclosure Movement; Economic History of the United States. Pp. 270.	1.00
3.	** The History and Theory of Shipping Subsidies. By R. Meeker. Pp. 230.	1.00
4.	Factory Legislation in the State of New York. By. F. R. Fairchild. Pp. 218.	1.00

Volume VII, 1906

1.	Eighteenth Annual Meeting: Papers and Discussions on The Love of Wealth and the Public Service; Theory of Distribution; Governmental Regulation of Railway Rates; Municipal Ownership; Labor Disputes; The Economic Future of the Negro. Pp. 325.	1.00
2.	Railroad Rate Control. By H. S. Smalley. Pp. 147.	1.00
3.	On Collective Phenomena and the Scientific Value of Statistical Data. By E. G. F. Gryzanovski. Pp. 48.	.75
	Handbook of the Association, 1906. Pp. 48.	.25
4.	The Taxation of the Gross Receipts of Railways in Wisconsin. By G. E. Snider. Pp. 138.	1.00

Volume VIII, 1907

1.	Nineteenth Annual Meeting: Papers and Discussions on Modern Standards of Business Honor; Wages as Determined by Arbitration; Commercial Education; Money and Banking; Western Civilization and Birth Rate; Economic History; Government Regulation of Insurance; Trusts and Tariff; Child Labor. Pp. 268.	1.00
2.	Historical Sketch of the Finances and Financial Policy of Massachusetts from 1780 to 1905. By C. J. Bullock. Pp. 144.	1.00
	Handbook of the Association, 1907. Pp. 50.	.25
3.	The Labor Legislation of Connecticut. By Alba M. Edwards. Pp. 322.	1.00
4.	The Growth of Large Fortunes. By G. P. Watkins. Pp. 170.	1.00

Volume IX, 1908

	Handbook of the Association, 1908. Pp. 49.	$ .25
1.	Twentieth Annual Meeting: Papers and Discussions on Principles of Government Control of Business; Are Savings Income; Agricultural Economics; Money and Banking; Agreements in Political Economy; Labor Legislation; Relation of the Federal Treasury to the Money Market; Public Service Commissions. Pp. 311.	1.25
2.	Chicago Traction. By R. E. Heilman. Pp. 131.	1.00
3.	Factory Legislation of Rhode Island. By J. K. Towles. Pp. 119.	1.00
4.	** Progressive Taxation in Theory and Practice. Revised Edition. By E. R. A. Seligman. Pp. 334.	1.25

Volume X, 1909

1.	Twenty-first Annual Meeting: Papers and Discussions on The Making of Economic Literature; Collective Bargaining; Round Table on Accounting; Labor Legislation; Employers' Liability; Canadian Industrial-Disputes Act; Modern Industry and Family Life; Agricultural Economics; Transportation; Revision of the Tariff; A Central Bank; The National Monetary Commission; Capitalization of Public Service Corporations in Massachusetts. Pp. 432.	1.50
2.	Handbook of the Association, 1909. Pp. 59.	.25
3.	** The Printers. By George E. Barnett. Pp. 379.	1.50
4.	Life Insurance Reform in New York. By W. H. Price. Pp. 95.	.75

Volume XI, 1910

1.	Twenty-second Annual Meeting: Papers and Discussions on History of the Association; Observation in Economics; Economic Dynamics; Theory of Wages; Country Life; Valuation of Public Service Corporations; Trusts; Taxation. Pp. 386.	1.50
2.	** Handbook of the Association, 1910. Pp. 79.	.25
3.	The Child Labor Policy of New Jersey. By A. S. Field. Pp. 229.	1.25
4.	The American Silk Industry and the Tariff. By F. R. Mason. Pp. 178.	1.00

THE ECONOMIC BULLETIN

Published quarterly in 1908, 1909, and 1910, and containing personal notes, news of the economic world, announcements of special lines of investigation, and a classified and annotated bibliography of the current books and articles on economic subjects.

Volume I, 1908. Four numbers.	$2.00; each .60
Volume II, 1909. Four numbers.	$2.00; each .60
Volume III, 1910. Four numbers.	$2.00; each .60

FOURTH SERIES

Volume I, 1911

The American Economic Review, **March, June, September, and December; each,	1.00
Twenty-third Annual Meeting: Papers and Discussions on the Significance of a Comprehensive System of Education; Money and Prices; The Ricardo Centenary; Accounting; Canals and Railways; Population and Immigration; Labor Legislation; Taxation; A Definition of Socialism; Competition in the Fur Trade. Pp. 388.	1.50
**Handbook of the Association, 1911.	.25

Volume II, 1912

The American Economic Review, March, June, September, and December; each,	1.00
Supplement.—Twenty-fourth Annual Meeting: Papers and Proceedings. The Economic Utilization of History; Tariff Legislation; The Federal Budget; Rural Conditions; Selection of Population by Migration; The Price Concept; An International Commission on the Cost of Living; Industrial Efficiency. Pp. 146.	1.25

Volume III, 1913

The American Economic Review, March, June, ** September, and ** December; each,	1.25
Supplement.—Twenty-fifth Annual Meeting:	

Papers and Proceedings. Population or Prosperity; The Rising Cost of Living—Standardizing the Dollar; Banking Reform; Theories of Distribution; Farm Management; Governmental Price Regulation. Pp. 155.	$1.25
Supplement.—Handbook of the Association, 1913.	.50

Volume IV, 1914

The American Economic Review, March, June, September, and December; each,	1.25
Supplement.—Twenty-sixth Annual Meeting: Papers and Proceedings. The Increasing Governmental Control of Economic Life; The Control of Public Utilities; Railroad Rate Making; Syndicalism; Trust Decisions and Business. Pp. 211.	1.25
Supplement.—Handbook of the Association, 1914.	.75

Volume V, 1915

The American Economic Review, March, June, September, and ** December; each,	1.25
Supplement.—Twenty-seventh Annual Meeting: Papers and Proceedings. Economics and the Law; Regulation of the Stock Exchanges; Market Distribution; Statistical Work of the United States Government; Relation of Education to Industrial Efficiency; The Effect of Income and Inheritance Taxes on the Distribution of Wealth; Public Regulation of Wages. Pp. 323.	1.25

Volume VI, 1916

The American Economic Review, ** March, ** June, September, and ** December; each,	1.25
** Supplement.—Twenty-eighth Annual Meeting: Papers and Proceedings. The Apportionment of Representatives; Effect of the War on Foreign Trade; Budget Making and the Increased Cost of Government; Economic Costs of War; Economic Theorizing and Scientific Progress; The Role of Money in Economic Theory; Price Maintenance; Investment of Foreign Capital. Pp. 248.	1.25
Supplement.—Handbook of the Association, 1916.	.75

Volume VII, 1917

The American Economic Review, March, June, September, and December; each,	1.25
Supplement.—Twenty-ninth Annual Meeting: Papers and Proceedings. The National Point of View in Economics; Landed Property; Two Dimensions of Economic Productivity; Some Social Surveys in Iowa; The Land Problem and Rural Welfare; The Federal Farm Loan Act; Statistics of the Concentration of Wealth; Gold Supply at the Close of the War; Loans and Taxes in War Finance; Problems of Population after the War; Some Phases of the Minimum Wage. Pp. 275.	1.25
Supplement.—Index to the Publications, 1886-1910.	.35

Volume VIII, 1918

The American Economic Review, March, June, September, and ** December; each,	1.25
Supplement.—Thirtieth Annual Meeting: Papers and Proceedings. Economic Reconstruction; Federal Taxes upon Income and Excess Profits; Land Utilization and Colonization; Federal Valuation of Railroads; Co-ordination of Employment Bureaus; Control of the Acquisition of Wealth; Motives in Economic Life; Price-Fixing; Problems of Governmental Efficiency; Economic Alliances and Tariff Adjustments. Pp. 317.	1.25

Volume IX, 1919

The American Economic Review, ** March, ** June, September, and December; each,	1.25
** Supplement.—Thirty-first Annual Meeting: Papers and Proceedings. Economists in Public Service; Interest on Investment a Manufacturing Cost Factor; Control of Marketing Methods and Costs; War and the Supply of Capital; War and the Rate of Interest; Index of the Cost of Living; Securing the Initiative of the Workman; A Legal Dismissal Wage; After-War Gold Policies; Foreign Exchange; Stabilizing the Dollar; Tenancy of Landed Property; Price-Fixing; Economic Theory in an Era of Readjustment; Psychology and Economics; The Open Door and	

Papers and Proceedings. Decline of Laissez Faire; Small Loan Business; Social and Economic Aspects of Chain Stores; Russian Economic Situation; Trustification and Economic Theory; Persistence of the Merger Movement; Program of the Federal Farm Board; Social Implications of Restriction of Agricultural Output; Land Economics and Real Estate; Institutionalism—What It Is and What It Hopes to Become; An Approach to World Economics; International Industrial Relations—Migration of Enterprise and Policies Affecting It; World-Wide Depression of 1930; Present Depression—A Tentative Diagnosis; Power and Propaganda; Failure of Electric Light and Power Regulation and Some Proposed Remedies. Pp. 302. $1.25

Supplement No. 2.—Handbook of the Association, 1931. 2.00

Volume XXII, 1932

The American Economic Review, March, June, September, and December; each, 1.25

Supplement.—Forty-fourth Annual Meeting:

Papers and Proceedings. Private Enterprise in Economic History; Shorter Working Time and Unemployment; Quantitative Economics; Theory of Technological Progress and the Dislocation of Employment; Measurement of Productivity Changes and the Displacement of Labor; Stabilization of Business and Employment; Principle of Planning and the Institution of Laissez Faire; Institutional Economics; Elasticity of Demand as a Useful Marketing Concept; Investments of Life Insurance Companies; Real Estate in the Business Cycle; Investments and National Policy of the United States in Latin America; Recent Changes in the Character of Bank Liabilities and the Problem of Bank Reserves; Bank Failures in the United States; Transportation by Rail and Otherwise; Our Changing Transportation System. Pp. 306. 1.25

Volume XXIII, 1933

The American Economic Review, March, June, September, and December; each, 1.25

Supplement.—Forty-fifth Annual Meeting:

Papers and Proceedings. Rise of Monopoly in the United States; Record of Insurance in the Depression; Some Theoretical Aspects of Unemployment Reserves; The Economics of Unemployment Relief; American Economic Thought; Formation of Capital; Measurement and Relation to Economic Instability; Size of Business Unit as a Factor in Efficiency of Marketing; Reserve Bank Policy and Economic Planning; Federal Reserve Policy in World Monetary Chaos; Tariff Reform: The Case for Bargaining; Speculation in Suburban Lands; Real Estate Speculation and the Depression. Pp. 206. 1.25

Supplement No. 2.—Handbook of the Association, 1933. 2.00

Volume XXIV, 1934

The American Economic Review, **March, June, September, and December; each, 1.25

** Supplement.—Forty-sixth Annual Meeting:

Papers and Proceedings. The History of Recovery; Public Utilities in the Depression; Imperfect Competition; Fundamentals of a National Transportation Policy; Correlation of Rail and Highway Transportation; Marketing under Recovery Legislation; Economics of the Recovery Act; Measurement of Unemployment; Controlled Inflation; Banking Act of 1933—An Appraisal; Some Statistics on the Gold Situation; The Problem of Tax Delinquency; The Problem of Expanding Governmental Activities; The Economics of Public Works. Pp. 224. 1.25

Volume XXV, 1935

The American Economic Review, March, June, September, and December; each, 1.25

Supplement.—Forty-seventh Annual Meeting:

Papers and Proceedings. NRA Examined; Rate-making Problems of TVA; New Deal and the Teaching of Economics; Paths of Economic Change; Business Enterprise and the Organization of Production; Changes in the Character, Structure, and Conditions of Production; International Aspects of Problems of Production and Trade; International Movements of Capital; Our Commercial Banking System; Aspects of Co-ordination and Finance; Some Lessons Drawn from European Experience; Nationalism; Security Regulation and Speculation; Monetary Stabilization from an International

Point of View; Monetary Stabilization from a National Point of View; Decentralization of Population and Industry; Co-ordination of State and Local Finance; Relief Aspects of the New Deal; Unified Program for the Unemployed. Pp. 240.	$1.25

Volume XXVI, 1936

The American Economic Review, March, June, September, and December; each,	1.25
Supplement.—Forty-eighth Annual Meeting: Papers and Proceedings. Some Distinguishing Characteristics of the Current Recovery; Price Theories and Market Realities; Notes on Inflexible Prices; Effect of the Depression upon Earnings and Prices of Regulated and Nonregulated Industries; Size of Plants in Its Relation to Price Control and Price Flexibility; Requisites of Free Competition; Monopolistic Competition and Public Policy; Banking Act of 1935; Recent Legislation and the Banking Situation; Economic Aspects of an Integrated Social Security Program; Capital Formation; Trade Agreements Program and American Agriculture; Founding and Early History of the American Economic Association; Developments in Economic Theory; Federal Revenue Act of 1935; Relations between Federal, State, and Local Finances; Equalization of Local Government Resources; Adjustment to Instability; Transportation Problems; Fifty Years' Developments in Ideas of Human Nature and a Motivation; Institutional Economics; Place of Marginal Economics in a Collectivist System; Problem of Prices and Valuation in the Soviet System; Effects of New Deal Legislation on Industrial Relations; Report of the Fiftieth Anniversary Dinner. Pp. 350.	1.25
** Supplement No. 2.—Handbook of the Association, 1936.	2.00

Volume XXVII, 1937

The American Economic Review, March, June, September, and December; each,	1.25
Supplement.—Forty-ninth Annual Meeting: Papers and Proceedings. Economic Interdependence, Present and Future; Quantitative and Qualitative Changes in International Trade During the Depression; Current Tendencies in Commercial Policy; Trade Problem of the Pacific; Analysis of the Nature of American Public Debts; Limits to Possible Debt Burdens, Federal, State, and Local; Debt Retirement and the Budget; United States Debt—Distribution among Holders and Present Status; Federal-State Unemployment Compensation Provisions of the Social Security Act; Unemployment Relief and Insurance; Economic Problems Arising from Social Security Taxes and Reserves; The Situation of Gold Today in Relation to World Currencies; Mechanisms and Objectives for the Control of Exchange; The Adequacy of Existing Currency Mechanisms Under Varying Circumstances; Present Situation of Inadequate Housing; Financing of Housing; Some Economic Implications of Modern Housing; Managed Currency; A Critique of Federal Personnel Policies as Applied to Professional Social Science Positions; New Opportunities for Economists and Statisticians in Federal Employment; Government Employment as a Professional Career in Economics; Indicia of Recovery; Housing and Housing Research; Distribution of Purchasing Power and Business Fluctuations; Forecast of Power Development; The Possibility of a Scientific Electrical Rate System; Co-ordination of Public and Private Power Interests in European Countries; Recent Developments in the Theory of Speculation; Control of Speculation under the Securities Exchange Act; Unorganized Speculation: the Possibility of Control. Pp. 333.	1.25

Volume XXVIII, 1938

The American Economic Review, March, June, September, and December; each,	1.25
Supplement.—Fiftieth Annual Meeting: Papers and Proceedings. The Significance of Marxian Economics for Present-day Economic Theory; The Significance of Marxian Economics for Current Trends of Governmental Policy; The Rate of Interest; Security Markets and the Investment Process; Relation of Price Policy to Fluctuations of Investment; General Interest Theory; Rate of Interest; Security Regulation; Corporate Price Policies; Fiscal Policies; Rate of Consumption; Wage Rates; Social Security Program; Rate of Consumption; Durable Consumers Goods; Wage Policies. Pp. 192.	1.25
Supplement No. 2.—Handbook of the Association, 1938.	2.50

Volume XXIX, 1939

The American Economic Review, **March, **June, September, and December; each, $1.25

Supplement.—Fifty-first Annual Meeting:

Papers and Proceedings. Problem of Industrial Growth in a Mature Economy; Effects of Current and Prospective Technological Developments upon Capital Formation; Public Investment in the United States; Expansion and Contraction in the American Economy; Effect of Industrial and Technological Developments upon Demand for Capital; Role of Public Investment and Consumer Capital Formation; Income and Capital Formation; Price and Production Policies of Large-Scale Enterprise; Changing Distribution Channels; Financial Control of Large-Scale Enterprise; Pure Theory of Production; Changing Character of American Industrial Relations; Wages and Hours in Relation to Innovations and Capital Formation; Effect of Wage Increase upon Employment; Relation of Wage Policies and Price Policies; An Appraisal of Factors Which Stopped Short the Recovery Development in the United States; Fiscal Policy in the Business Cycle; An Appraisal of the Workability of Compensatory Devices; Divergencies in the Development of Recovery in Various Countries; Factors Making for Change in Character of Business Cycle; Industrial Relations. Pp. 280. 1.25

Volume XXX, 1940

The American Economic Review, March, June, September, and December; each, 1.25

**Supplement.—Fifty-second Annual Meeting:

Papers and Proceedings. Objectives of Monetary Policy; Economic Issues in Social Security Policy; Bank Deposits and the Business Cycle; Problems in the Teaching of Economics; Price Control Under "Fair Trade" Legislation; Problems of American Commercial Policy; Transportation Problem; Preserving Competition Versus Regulating Monopoly; Theory of International Trade; Collective Bargaining and Job Security; Banking Reform Through Supervisory Standards; Incidence of Taxation; Economic Planning; Growth of Rigidity in Business; Economics of War; Population Problems; Cost Functions and Their Relation to Imperfect Competition. Pp. 436. 1.25

Supplement No. 2—Handbook of the Association, 1940. 2.00

No. 5 (February, 1941)

Fifty-third Annual Meeting (December, 1940):

Papers and Proceedings. Gold and the Monetary System; Economic Research; Federal Budget; Economic Consequences of Deficit Financing; Teaching of Economics; Agricultural Situation; A Review of Fundamental Factors, an Evaluation of Public Measures, and an Appraisal of Prospects; Status and Role of Private Investment in the American Economy, 1940; Unemployment in the United States, 1930-50; Economic Consequences of War Since 1790; Some Economic Problems of War, Defense, and Postwar Reconstruction; United States in the World Economy, 1940; International Economic Relations and Problems of Commercial Policy; Price Policy and Price Behavior. Pp. 458. 1.25

Volume XXXI, 1941

The American Economic Review, March, June, **September, and December; each, 1.25

Volume XXXII, 1942

The American Economic Review, March, June, **September, and December; each, 1.25

Supplement.—Fifty-fourth Annual Meeting:

Papers and Proceedings. Economic Adjustments After Wars; Problems of Taxation; Determinants of Investment Decisions; Problems of International Economic Policy for the United States; History of American Corporations; Problems of Labor Market Research; Co-ordination of Federal, State, and Local Fiscal Policy; Technical Aspects of Applying a Dismissal Wage to Defense Workers; Problems of International Economic Policy; Impact of National Defense and the War upon Public Utilities; Future of Interest Rates; Effect of Managerial Policy upon the Structure of American Business; Economic Effects of Wars; Economic Aspects of Reorganization Under the Chandler Act; Economics of Industrial Research; Objectives in

Applied Land Economics Curricula; Changing Position of the Banking System and Its Implications for Monetary Policy; Determination of Wages; Economic Problems of American Cities; Cost and Demand Functions of the Individual Firm; Problems of Price Control; Effects of the War and Defense Program upon Economic Conditions and Institutions; Trade Unions and the Law. Pp. 534.	$1.25
Supplement No. 2.—Papers Relating to the Temporary National Economic Committee. Pp. 135.	.50
Supplement No. 3.—Directory. Pp. 198.	3.00

Volume XXXIII, 1943

The American Economic Review, **March, June, September, and December; each,	1.25
Supplement.—Fifty-fifth Annual Meeting:	
Papers and Proceedings. Economic Claims of Government and of Private Enterprise; Our Industrial Plant When Peace Comes; Financial and Government Contract Adjustments of Industry at the End of the War; Problems of Public Policy Raised by Collective Bargaining; Our Labor Force When Peace Comes; Price Control and Rationing; Case Studies in Price Control; Restoration of International Trade; Future of International Investment; International Financial Relations After the War; Economic Regionalism and Multilateral Trade; Bases of International Economic Relations; International Commodity Agreements. Pp. 508 + 15.	1.25

Volume XXXIV, 1944

The American Economic Review, March, June, September, and December; each,	1.25
Supplement.—Fifty-sixth Annual Meeting:	
Papers and Proceedings. Political Science, Political Economy, and Values; Educational Function of Economists and Political Scientists; Public Administration of Transportation under War Conditions; How Achieve Full and Stable Employment; Incentive Problems in Regulated Capitalism; Postwar Labor Problems; Social Security; Postwar Legal and Economic Position of American Women; Postwar Domestic Monetary Problems; Economic Organization of Welfare; International Trade; Regional Problems; International Monetary Problems. Pp. 440 + 16.	1.25
Supplement No. 2.—Implemental Aspects of Public Finance. Pp. 138.	1.00

Volume XXXV, 1945

The American Economic Review, March, June, September, and December; each,	1.25
Supplement (May).—Fifty-seventh Annual Meeting:	
Papers and Proceedings. Consumption Economics; Expanding Civilian Production and Employment After the War; Natural Resources and International Policy; Interdepartmental Courses in the Social Sciences; Price Control and Rationing in the War-Peace Transition; Organized Labor and the Public Interest; Aviation in the Postwar World; International Monetary and Credit Arrangements; Agricultural Price Supports and Their Consequences; Political Economy of International Cartels; Fiscal Problems of Transition and Peace; Problems of Regionalism in the United States; Food and Agriculture—Outlook and Policy; Function of Government in the Postwar American Economy. Pp. 520 + 16.	1.25

Volume XXXVI, 1946

The American Economic Review, March, **June, September, and December; each,	1.25
**Supplement (May).—Fifty-eighth Annual Meeting:	
Papers and Proceedings. Problem of "Full Employment"; American Economy in the Interwar Period; Postwar Labor Relations; Monetary Policy; Changing Structure of the American Economy; Economic Problems of Foreign Areas; Publication of an Annual Review of Economics; New Frontiers in Economic Thought; Postwar Shipping Policy; Monopoly and Competition; Postwar Tax Policy; Postwar Railroad Problems; International Investment; Recent Developments in Public Utility Regulation; International Cartels; Economic Research; Methods of Focusing Economic	

Opinion on Questions of Public Policy (e.g., Monetary, Agricultural Price Supports); Undergraduate Teaching of Economics. Pp. 960. $1.25
Supplement No. 2—Handbook. Pp. 143. 2.00

Volume XXXVII, 1947

The American Economic Review, **March, **June, September, and December; each, 1.25
Supplement (May).—Fifty-ninth Annual Meeting:
Papers and Proceedings. Employment Act of 1946 and a System of National Bookkeeping; Social and Economic Significance of Atomic Energy; Public Debt: History, Effects on Institutions and Income; Economic Forecasts, and Monetary Aspects; Role of Social Security in a Stable Prosperity; Economic Outlook; Economy of the U.S.S.R.; Domestic versus International Economic Equilibrium; Prices: Wartime Heritage and Some Present Problems; Banking Problems; Productivity in the American Economy; International Trade Organization; Vital Problems in Labor Economics; Transportation and Public Utilities Problems; Housing Problems; Economic Research; Changing Character of Money. Pp. 781. 1.50

Volume XXXVIII, 1948

The American Economic Review, **March, **June, September, and December; each, 1.25
**Supplement (May).—Sixtieth Annual Meeting:
Papers and Proceedings. Economic Theory of Imperfect Competition, Oligopoly, and Monopoly; Role of Monopoly in the Colonial Trade and Expansion of Europe; Progress of Concentration in Industry; Does Large-Scale Enterprise Result in Lower Costs; Sherman Act and the Enforcement of Competition; Patent Policy; A Consideration of the Economic and Monetary Theories of J. M. Keynes; Keynesian Economics: The Propensity to Consume and the Multiplier, and Savings, Investment, and Wage Rates; Economics Collides with Ethics; An Appraisal of the Taft-Hartley Act; Fiscal Policy in Prosperity and Depression; Problems of Timing and Administering Fiscal Policy in Prosperity and Depression; Transportation and Public Utilities; Futility of Trust-Busting; National Productivity. Pp. 591. 1.50

Volume XXXIX, 1949

The American Economic Review, **March, **June, September, and December; each, 1.25
Supplement (No. 1—January).—Directory. Pp. 343.† 3.00
Supplement (No. 3—May).—Sixty-first Annual Meeting:
Papers and Proceedings. Commemoration of the Centenary of the Communist Manifesto—The Sociology and Economics of Class Conflict; Current Research in Business Cycles; Interregional Variations in Economic Fluctuations; Economic Research; Economic Consequences of Some Recent Antitrust Decisions; Theory and Measurement of Price Expectations; Input-Output Analysis and Its Use in Peace and War Economies; Liquidity and Uncertainty; Problems of the ITO; Commodity Marketing—Going Where; John Stuart Mill—Centennial Appraisal; Possibilities for a Realistic Theory of Entrepreneurship; Economics of Preparedness for War; Present Issues of the Latin-American Economy. Pp. 537. 1.50

† This issue is not included in the price of the volume.

Volume XL, 1950
($6.00 a Volume)

The American Economic Review, March, June, September, and December; each, 1.50
Supplement (No. 2—May).—Sixty-second Annual Meeting:
Papers and Proceedings. What Planning and How Much Is Compatible with a Market Economy—Recent European Experience; Capitalism and Monopolistic Competition—I. The Theory of Oligopoly, II. Can the American Economy Be Made More Competitive; Capitalism and Economic Progress; Stabilizing the Economy—The Employment Act of 1946 in Operation; Problems of an Advanced Defense Economy; Transportation in

Capitalist and Socialized Economies; Can Capitalism Dispense with Free Labor Markets; Capitalism and Equality of Income; Tax Structure and Private Enterprise; Economic Power Blocs and American Capitalism; American Capitalism—Where Are We Going; U. S. Foreign Investment in Underdeveloped Areas; Economic Policy in Occupied Germany. Pp. 650.	$2.00
Supplement.—Supplement to 1948 Directory. Pp. 41.	1.00
Supplement No. 2.—The Teaching of Undergraduate Economics. Pp. 226.	2.00

Volume XLI, 1951

($6.00 a Volume)

The American Economic Review, March, June, September, and December; each,	1.50
Supplement (No. 2—May).—Sixty-third Annual Meeting: Papers and Proceedings. Role and Interests of the Consumer; Institutional Economics; Executive Decisions at the Top Level; Economic Theory, Statistics, and Economic Practice; Capital and Interest; Economic Stabilization; Modern Industrialism and Human Values; Factors in Modern Industrial Development; Government Action or Private Enterprise in River Valley Development; Economic Progress—Some Cases, Comparisons, and Contrasts; Point Four—Development of Backward Areas; Current Problems in International Trade; Economy of the Soviet Union; Changes in National Transportation Policy; Public Utilities and National Policy; Housing Problem—Current Situation and Long-run Effects of Government Housing Programs; Economics of Medical Care—The Problem and Alternative Solutions; Economics in General Education. Pp. 816.	2.00

The American Economic Association, founded, among other purposes, for the "encouragement of economic research" and "the encouragement of a perfect freedm of economic discussion," has about seven thousand members, including public and professional men and most of the leading students of political economy in America. Membership dues are six dollars a year. Each member receives all current reports and publications of the Association.

Address all orders for publications, applications for membership, and inquiries to

Dr. James Washington Bell
SECRETARY OF THE AMERICAN ECONOMIC ASSOCIATION
Northwestern University, Evanston, Illinois